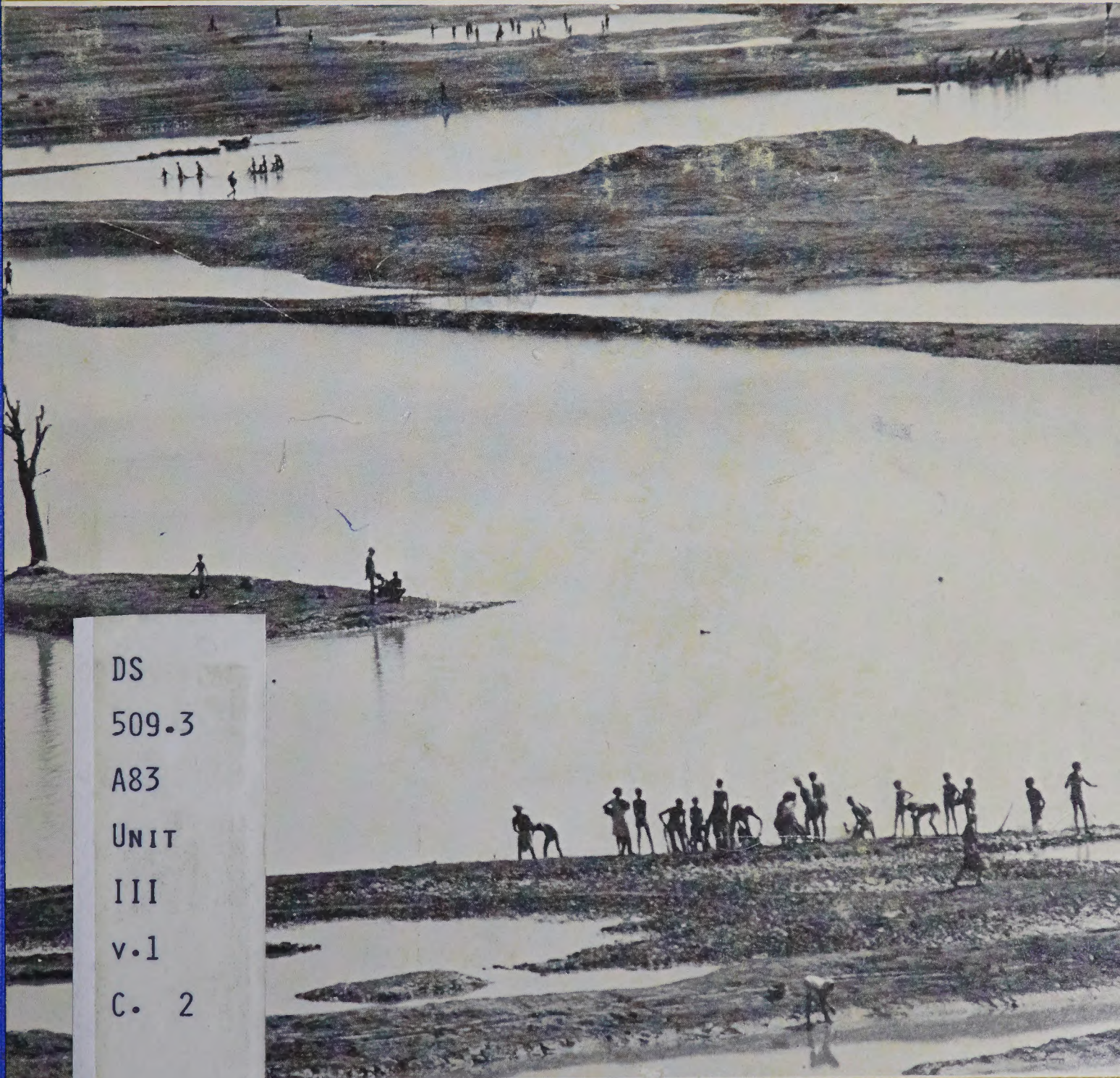


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Man and His Environment in Asia



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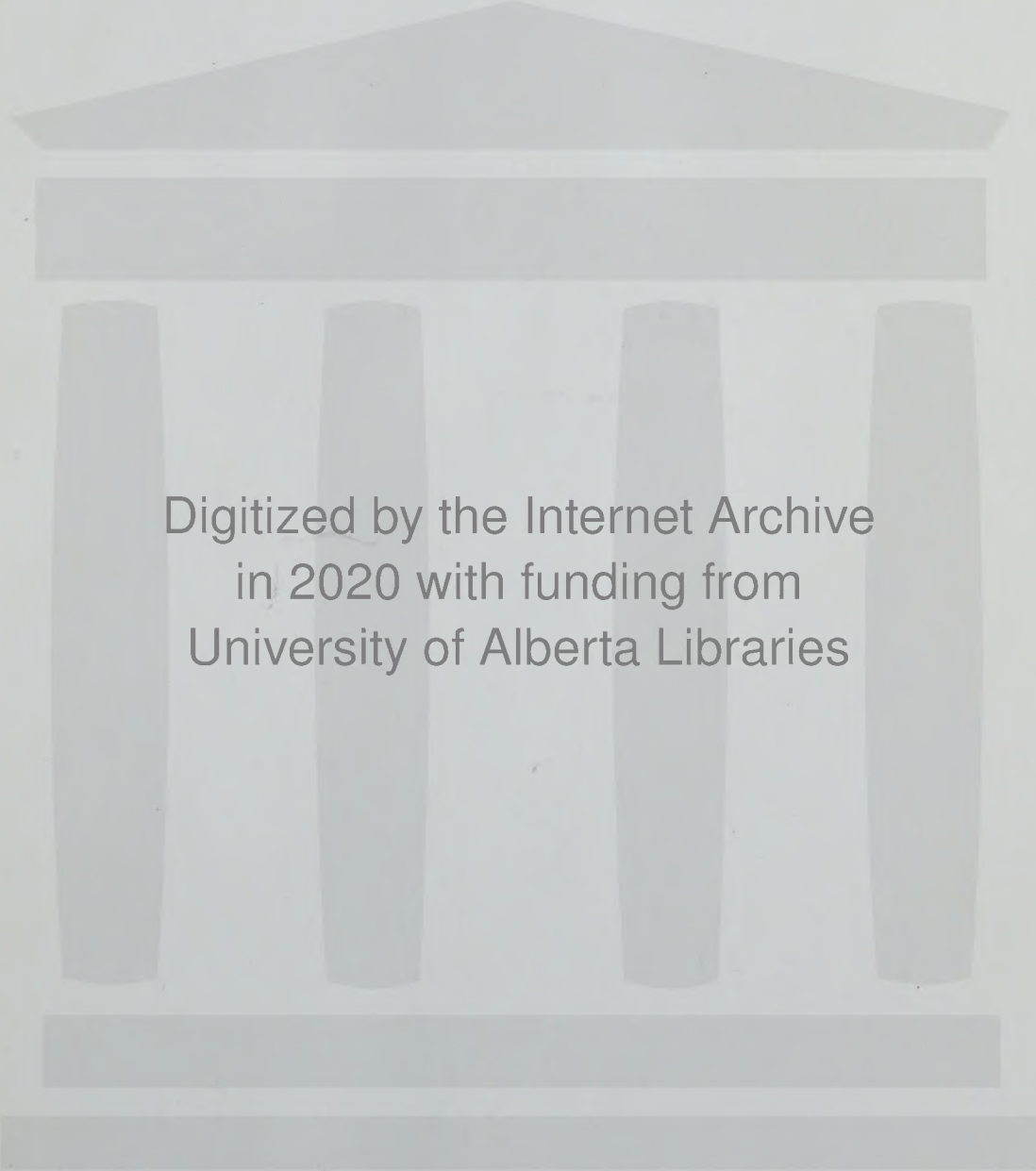
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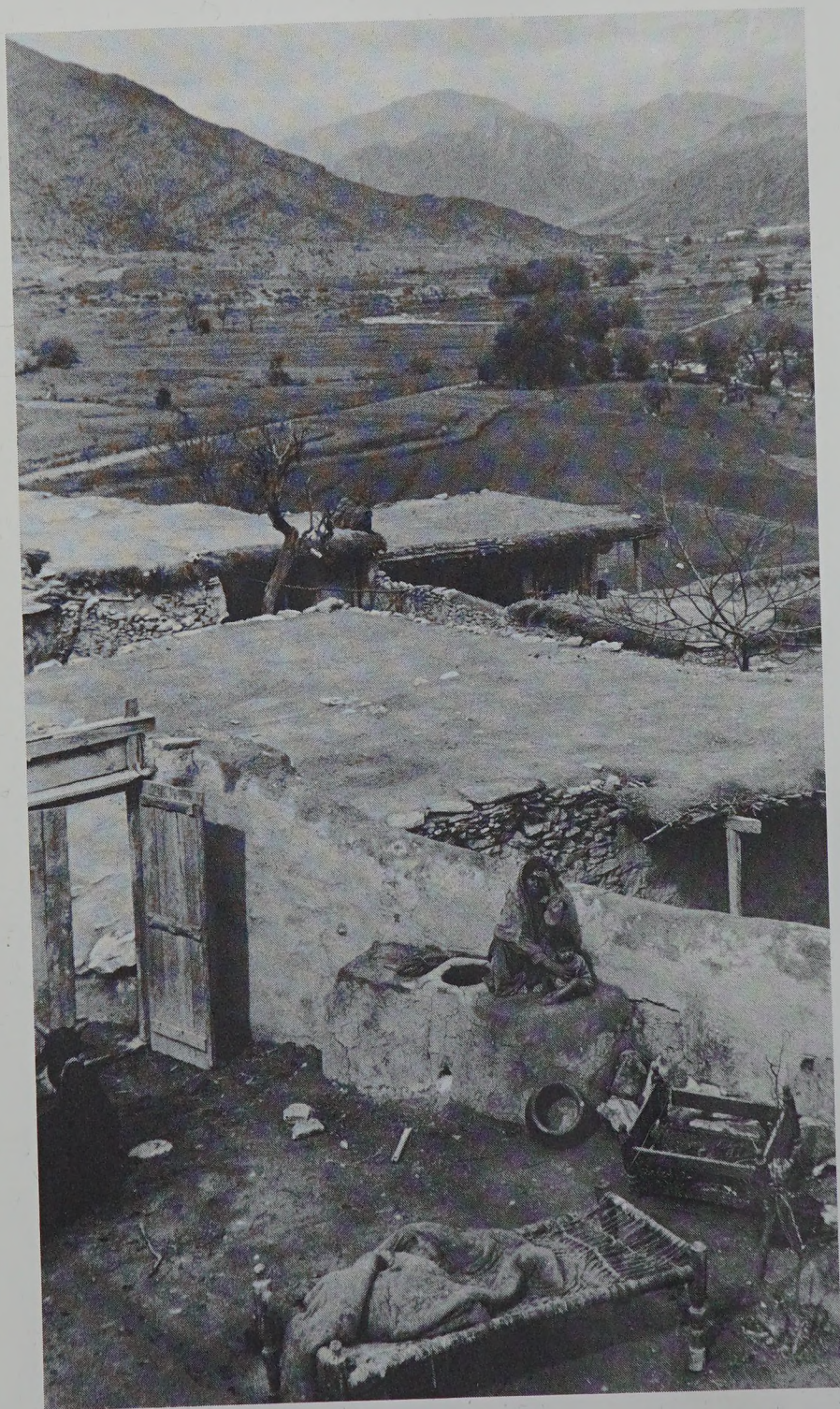


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Man and His Environment in Asia

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ASIAN STUDIES INQUIRY PROGRAM

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Many Asians live in river valleys because the rivers are used for irrigation and transportation.

Man cannot escape the land. In Asia, as in most of the world, man's daily routine shows in countless ways his dependence upon the earth for livelihood, relaxation, and fulfillment of spiritual needs. The Asian man's concern begins with the soil and ultimately returns to the soil. However, such an involvement with the physical surroundings does not imply that man has no control over them. As man works with the earth, he must make decisions about the way in which to do this work. The two sections in this unit reflect this twofold involvement of man with his physical environment. The first section, entitled "Asia's Physical Diversity," considers the different aspects of the Asian world of wind and water, that is, Asia's physical geography. The second section, entitled "Asian Man and His Environment," illustrates the variety of ways in which Asian man has chosen to modify his physical surroundings; that is, it discusses Asia's cultural geography.

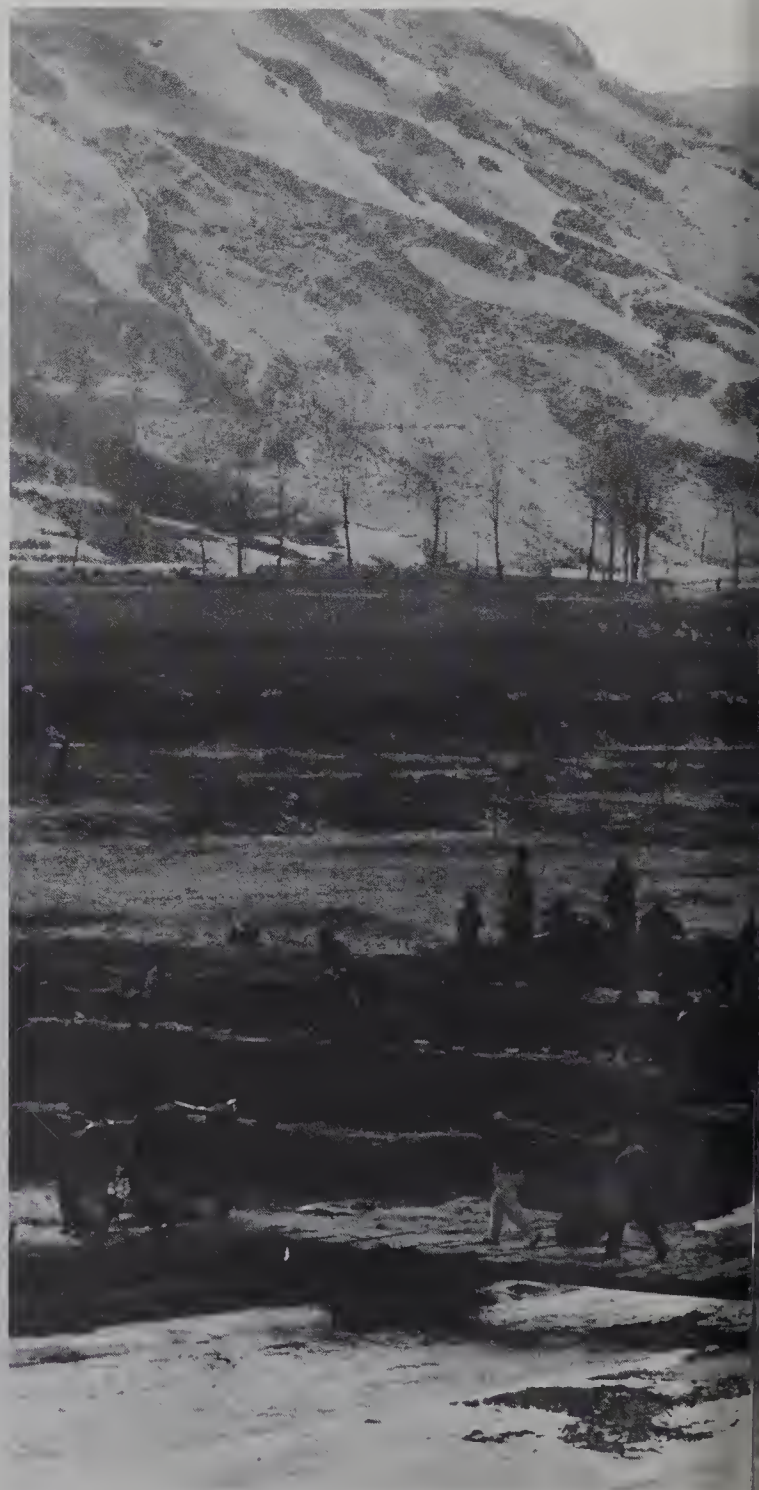
Asian man is almost completely an agricultural man. Three-quarters of the Asian population gain their livelihood by working the soil, but there are vast differences in the way in which their labors are applied. Within one Indian village one may find farmers in one neighborhood growing jute to sell to burlap manufacturers and

using the cash for purchasing food and other necessities. Next to the jute growers may live farmers who tend wet rice paddies, growing almost all of their own food and selling what surplus they have to obtain money for other needs or wants. In another district of the same village community may live farmers who choose to grow upland rice, corn, sweet potatoes, or tea on farmlands that they do not irrigate. Though they are less likely to reap a surplus, they are more independent than the other farmers and have more leisure time for religious rituals or for hunting. All three of these groups represent agricultural people who daily make the land produce for them; yet each of the three groups has a different response to the land.

The readings are drawn from all types of literature to show the many aspects of the relationship between man and his environment in Asia. As you read the stories, essays, and other selections, ask yourself the question: Where has man made a choice about his labors on the land, and where has he been forced into a particular position by the nature of the physical world? When you understand the balance between physical forces and human choice, you will begin to understand the relationship between wind, water, and man in Asia.

Asia's Physical Diversity

The five readings in this section illustrate the physical diversity of Asia. You may quickly forget statistics on rainfall and on temperature changes, but when you read a moving account of the powerful influence of land on man—such as Pearl Buck's portrayal in her novel *The Good Earth*—the elements of Asian physical geography remain imprinted on the mind. The readings are varied, some dealing more specifically with geography than others, but all show the different kinds of physical environment in which Asian people must earn their livelihood.





The Monsoon in India

Climate can be described with graphs, charts, tables, and maps—or with a novelist's pen. Only the novelist, however, gives real feeling to these geographic forces. Khushwant Singh, the author of this selection, shows how totally the monsoon dominates the lives of those who live in its shadow. To study the monsoon only by reading rainfall and wind charts would tell nothing of how it influences daily existence. Singh gives the monsoon real life.

To know India and her peoples, one has to know the monsoon. It is not enough to read about it in books, or see it on the cinema screen, or hear someone talk about it. It has to be a personal experience because nothing short of living through it can fully convey all it means to a people for whom it is not only the source of life, but also their most exciting impact with nature. What the four seasons of the year mean to the European, the one season of the monsoon means to the Indian. It is preceded by desolation; it brings with it the hopes of Spring; it has the fullness of summer and the fulfillment of autumn all in one.

Those who mean to experience it should come to India some time in March or April. The flowers are on their way out and the trees begin to lose their foliage. The afternoon breeze has occasional whiffs of hot air to warn one of the days to come. For the next three months the sky becomes a

flat and colorless gray without a wisp of a cloud anywhere. People suffer great agony. Sweat comes out of every pore and the clothes stick to the body. Prickly heat erupts behind the neck and spreads over the body till it bristles like a porcupine and one is afraid to touch oneself. The thirst is unquenchable, no matter how much one drinks. The nights are spent shadow-boxing in the dark trying to catch mosquitoes and slapping oneself in an attempt to squash those hummings near one's ears. One scratches and curses when bitten; knowing that the mosquitoes are stroking their bloated bellies safely perched in the farthest corners of the nets, that they have gorged themselves on one's blood. When the cool breeze of the morning starts blowing, one dozes off and dreams of a paradise with ice cool streams running through lush green valleys. Just then the sun comes up strong and hot and smacks one in the

† Khushwant Singh, *I Shall Not Hear the Nightingale* (New York: Grove Press, Inc., 1959).

face. Another day begins with its heat and its glare and its dust.

After living through all this for ninety days or more, one's mind becomes barren and bereft of hope. It is then that the monsoon makes its spectacular entry. Dense masses of dark clouds sweep across the heavens like a celestial army with black banners. The deep roll of thunder sounds like the beating of a billion drums. Crooked shafts of silver zigzag in lightning flashes against the black sky. Then comes the rain itself. First it falls in fat drops; the earth rises to meet them. She laps them up thirstily and is filled with fragrance. It impregnates her with life which bursts forth in abundance within a few hours. Where there was nothing, there is everything: green grass, snakes, centipedes, worms, and millions of insects.

It is not surprising that much of India's art, music, and literature is concerned with the monsoon. Innumerable paintings depict people on roof tops looking eagerly at the dark clouds billowing out from over the horizon with flocks of herons flying in front. Of the many melodies of Indian music, *Raga Malhar* is the most popular because it brings to the mind distant echoes of the sound of thunder and the pitter-patter of raindrops. It brings the odor of the earth and of green vegetation to the nostrils; the cry of the peacock and the call of the koil to the ear. There is also the *Raga Desha* which invokes scenes of merry-making, of swings in mango groves, and the singing and laughter of girls. Most Indian palaces had specially designed balconies from where noblemen could view the monsoon downpour. Here they sat listening to court musicians improvising their own versions of monsoon melodies,

and sipping wine. The commonest theme in Indian songs is the longing of lovers for each other when the rains are in full swing. There is no joy fuller than union during monsoon time; there is no sorrow deeper than separation during the season of the rains.

An Indian's attitude to clouds and rain remains fundamentally different from that of the European. To the one, clouds are symbols of hope; to the other, those of despair. The Indian scans the heavens and if cumulus clouds blot out the sun his heart fills with joy. The European looks up and if there is no silver lining edging the clouds his depression deepens. The Indian talks of someone he respects and looks up to as a great shadow; like the one cast by the clouds when they cover the sun. The European, on the other hand, looks on a shadow as something evil and refers to people of dubious character as people under a shadow. For him, his beloved is like the sunshine and her smile a sunny smile. He escapes clouds and rain whenever he can and seeks sunnier climes. An Indian, when the rains come, runs out into the streets shouting with joy and lets himself be soaked to the skin.

The fact that the monsoons come at about the same time every year gives expectation a sort of permanent place in the Indian's mental calendar. This does not happen with other people, e.g., the Arabs, who also thirst for water and bless its descent. (If the Arabs had the monsoon turning up with the same regularity, their calendar would have taken note of changes of seasons instead of being linked with the vagaries of the moon.) All the different calendars current in India are a dexterous combination of the lunar and the solar

systems. As a result, the correspondence between the month and the season is much closer. On the official day heralding Spring, the chill winds of winter mysteriously vanish and a warm breeze begins to blow. Similarly, while the

coming of the monsoon may be any day in June or July by the Roman calendar, more often than not the first of Sawan will see it in full force all along the Western ghats and well inland up to the plains of the Punjab.



This is a typical scene of a windstorm in northern India prior to the monsoon rains that fall continuously from June to September. Even though the land is flooded and farming operations come to a standstill, these heavy rains are a blessing to the farmer for the climate is very dry the rest of the year.

Hills and Plains

Robbins Burling did field work and teaching in Southeast Asia, and has written several books from this experience. The source of this reading is his book *Hill Farms and Padi Fields*, in which he describes life in mainland Southeast Asia. The reading discusses the different kinds of terrain, climate, and cultural features of Southeast Asia, and is useful here as an introduction to the general features of Asian geography. Burling suggests two distinct worlds of farming in Asia—upland and lowland. This distinction can be found throughout Asia, from India and Southeast Asia to China, Japan, and Korea.

The corner of Asia that lies east of India and south of China is characterized more by its diversity than by its geographic or cultural uniformity. The towering mountains of the north have provided refuge for hundreds of distinct tribes and have slowed, though never stopped, the southward drift of people and ideas from China. Closer to the oceans, lowland plains formed by the great Southeast Asian rivers have allowed a relatively free movement of people and an easier exchange of ideas among them.

This topographical diversity is matched by cultural diversity. In the group of islands just below the southeastern tip of Burma are the Andamanese, who are counted among the world's most primitive people. They know nothing of agriculture

and support themselves by hunting and fishing. By contrast, the people of the mainland river valleys are heirs to an ancient civilization which stretches back almost two thousand years. The Burmese, the Thai, the Cambodians, and the Vietnamese all possess long traditions of literature and art. The ancestors of the Cambodians started to build their monumental capital of Angkor Wat more than a thousand years ago and every region has a history of centralized monarchy which stretches back even further. Religious diversity in Southeast Asia is so broad that most of the world's great religions are well represented there. The people of lowland Burma, Thailand, Laos, and Cambodia are mostly Buddhists of the southern, or Theravada, school; the Vietnamese adhere

[†] Robbins Burling, *Hill Farms and Padi Fields* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965).

to the northern, or Mahayana, school. Just to the east, in Assam, most of the people are Hindu, and those to the south, in Malaya, are Muslim. Even Christianity has a foothold which is several centuries old. Yet in the hills, many of the people have not yet joined any of these world-wide religions, but have remained faithful only to their tribal gods.

Today all the territory has been apportioned among nations which recognize tolerably well-defined boundaries, but not long ago this same area was marked by countless small tribes or even single villages which kept themselves more or less independent and maintained a fairly continuous state of mutual hostility or even warfare—a state of political fragmentation unequalled elsewhere in Asia. Hundreds of tribes considered themselves to be separate, distinct, and eternally independent from all others and the tribal map of Southeast Asia resembles the work of a wild man who has splattered his colors at random. Only a few decades ago many of the people in the hills were still enthusiastic headhunters. Linguistically, too, Southeast Asia is one of the world's most heterogeneous regions. It has hundreds of languages in a half-dozen unrelated families.

Nevertheless, to note the diversity of Southeast Asia is to tell only half the story, for beneath the diversity run numerous common threads. Among them are aspects of family organization, a respected position for women, the propitiation of malignant spirits, and similar technological habits.

Europeans are often surprised by the freedom of Southeast Asian women. Throughout this area, women do much of the marketing, join freely in conversation

with strangers, and usually take a vigorous part in all family decisions. They help manage the household budget and, it has been charged, they not infrequently manage their husbands as well. This sort of behavior is common enough among women in Europe or America, but it is remarkably unlike the behavior considered proper in either China or India, which are so much nearer to Southeast Asia. Southeast Asian women are far more likely to share in inherited wealth than are women in China or India where, except for the dowries set aside for daughters, everything is usually divided among the sons. Furthermore, Southeast Asians less often organize themselves into large kinship groups such as clans, and the small families of parents and children are usually relatively free of domination by grandparents. In all these features the typical Southeast Asian family seems more like the European family than that of most of Asia.

For reasons that are far from clear, Southeast Asians have usually avoided breeding populations as dense as those of their neighbors. In Cambodia only a quarter of the arable land is even cultivated, and although the other countries in the area are not quite so land-rich, few people have gone hungry. To Europeans Southeast Asia may seem poor, but to the Chinese and Indians it has always seemed wealthy and open, a land of beckoning opportunity for their excess poor.

Nearly everyone in Southeast Asia worries about spirits of one sort or another—spirits who live in trees, who lurk on roads, or who hide in streams. Because the spirits are usually believed to have nothing but ill will toward men, ceremonies must be designed to control them or to drive them

away and to assure the peace and health of the people. Many of the people in South-east Asia are members of some more systematic religious tradition, but they are rarely troubled by the notion that their belief in spirits might conflict with their faith in other religious doctrines.

The staple food everywhere in South-east Asia is rice, and it forms the basis of every proper meal. Side dishes often consist of some form of fish, though they may include vegetables or meat as well. These side dishes are called *curries* by Europeans, and they are usually so highly spiced with chili peppers as to startle the Western palate. Noodles are also popular, though more often as a snack than as the foundation for a main meal, and some people relish soup. The result is a cuisine that is something of a cross between that of China and that of India. Except where Chinese influence has been strong enough to introduce chopsticks, food is traditionally eaten with the fingers of the right hand.

Many Southeast Asians perch their houses upon stilts. It is pleasanter to be several feet above the ground: when the monsoon makes the ground damp and muddy, it is drier; in the hot season it is cooler. If the house is built high enough, the space beneath the living quarters can be used for storing household objects and crops and even for sheltering animals. The houses, always rectangular although their proportions vary, may be constructed either of bamboo or of wood. Whether the roofs are made of the traditional thatch or of the more modern sheets of corrugated iron, they must be designed to carry away the rain which is so abundant in most of Southeast Asia.

Iron has been used throughout South-

east Asia for many hundreds of years. In most villages there have been some who knew how to work it into their favorite shapes for tools and weapons, even though they had to purchase the metal from traders. Iron is so essential to the kind of life the people have worked out for themselves that it is difficult to imagine how they could ever have survived without it. Iron tools are needed to clear the forests for agriculture, and they must be used to work bamboo into the hundreds of objects essential to daily life. It is hard to imagine how the beautiful bamboo baskets that nearly everyone makes and uses today could have been produced without iron knives.

Each country in Southeast Asia has both hill people and plains people, and the contrast—and sometimes conflict—between the two ways of life can provide a theme which helps to bring order into our understanding of the area. Each of the modern nations of Southeast Asia includes a nucleus of plains people who form, in each case, a relatively homogeneous and dense population. Each of these peoples speaks a single dominant language, and is characterized by adherence to one of the world's great religions and subsistence based upon intensive "wet rice" agriculture. But each of the countries also includes a minority of hill people, who are always far more heterogeneous. They speak a multitude of languages, have had no political unity among themselves, and until the last century have never had more than tenuous political ties with the plains. The hill people usually practice shifting agriculture, and have been much slower to become Buddhists, Hindus, or Muslims than have their neighbors on the plains.



In mountainous places such as Java, where the farmers must make use of all available land, carefully tended rice terraces are carved from the mountain sides.

In spite of their proximity and the considerable similarity in their fundamental outlook upon life, the hill people and the plains people have met more often in violence than in love. As far as can be judged from the meager historical records, it seems likely that the contrast between these two fundamentally different styles of Southeast Asian life goes back some two thousand years or more. It may seem remarkable that these distinctions could have survived the blurring effects of countless wars, migrations, and the rise and fall of dynasties. The only possible explanation is that the differences in topography have limited the possibilities for development in the two areas, and have made it difficult

for either hill man or plains man to conquer the territory of the other or to impose his way of life upon his neighbor. Hill people seem to have conquered plains districts occasionally, but in the process they have themselves taken on all the cultural traits which are associated with life on the plains. No doubt, plains people have also invaded the hills from time to time, but in doing so they have lost their plains characteristics and have been converted to hill men.

The topographical contrast is striking. In Southeast Asia hills typically rise abruptly from plains like rugged islands from a smooth sea. The plains usually lie at very low elevation even when hundreds of miles away from the seacoast, and they are al-

ways covered by a network of meandering rivers that facilitate the movement of ideas and people. This encourages the fusing of customs into a uniform pattern among the people who happen to live there. Wet rice is generally easily grown on the plains, and this can support a dense population. Relative density of population and ease of communication permit political unity, for armies can be raised and transported to conquer new territory and incorporate it into large political aggregates and this in turn allows a still easier exchange of ideas. The Southeast Asian royal courts, with their relative wealth and leisure, brought people together from all over the kingdom and from the world beyond. Priests from India, ambassadors from China, and traders from all over the world brought glamor and sophistication to these courts, and their influence spread throughout the realm. In this way, religious ideas and legal codes, writing and scholarship spread over the plains, but rarely penetrated the hills.

Travel through the hills was more difficult, and prevailing agricultural methods did not allow the population to become so dense. Armies from the plains might be sent into the hills on brief punitive expeditions, but they could not secure enough food to support a permanent occupation or enough wealth to justify it. As a result, the plains kingdoms could never permanently conquer the hills, and for similar reasons the various hill peoples could not conquer each other, though they certainly fought. Hill peoples raided the plains and each other to take heads or to avenge some earlier grievance, but their raids were rarely more than hit-and-run affairs involving at most a few dozen men, for the hill tribes were not large enough

to recruit larger armies. Hill people might menace or even terrorize the plains, but they did not have the numbers to occupy the plains permanently.

The hills have encouraged local political independence, and this has given rise to greater variety in all aspects of life. In some hill districts, clothing varies so much that it seems to have been deliberately designed to be as distinctive as possible, so as to set each group off unmistakably from its neighbors. Languages, too, are far more varied in the hills than in the plains, and each tribe usually clings to its own unique form of speech. Kinship practices, agricultural techniques, and religious rituals differ from tribe to tribe.

There was no way of breaking down the distinction between hills and plains until modern technology put roads, trucks and cars, quinine, and guns at the disposal of the plains-based powers. Only then could rule from the plains be permanently extended into the hills. This has happened in the course of the last century, but it is so recent a phenomenon that the cultures of the hills and plains remain remarkably distinct. In most of the countries of Southeast Asia, the contrast is so sharp that it continues to be a source of political conflict.

But hill people and plains people have not been completely isolated from one another. They have taken many traits from each other, and most of the traits characteristic of Southeast Asia are as typical of the hills as of the plains. Certainly the area cannot be fully understood without considering both styles of life. However different they may seem, they are but variations on a single theme.

A different unifying theme has been recognized in the term *Indo-China*, which

once was used for all Southeast Asia. For at least two thousand years, the civilizations of India and of China have affected the way of life in Southeast Asia. It is usually assumed that the Mongoloid racial type of the present population is the result of the migration of large numbers of people from the north. A few Indian traders or priests have been settling in Southeast Asia at least since the first few centuries of the Christian era. In more recent times both Chinese and Indians have immigrated in larger numbers in search of wealth and opportunities not offered in their own crowded countries. Not only people but foreign ideas as well came into Southeast Asia and were absorbed by the indigenous people. From

India came a theory of royalty, a system of writing, an epic literature, and—most important of all—the religion of the Buddha. From China came technological skills, political theories, and—from time to time—political intervention. (Vietnam in particular owes much of its present culture to China.) Although these ideas and skills have been accepted, other aspects of the civilizations of their giant neighbors have been quietly turned down: the caste system of India, for instance, and the type of family organization found in both India and China. Southeast Asia has accepted more from the outside than it has given, but it has accepted selectively and, up to now, has escaped being absorbed by its neighbors.



Because machinery is expensive, most of the peasants of the Far East use hand labor and primitive tools to farm their small plots of land. These women are plowing a field in Sumatra, Indonesia.

Life from the Sea

The title of the book from which this reading is taken, *Mountains in the Sea*, tells an important fact about the geography of Japan. Like Great Britain, Japan has learned to live successfully with the sea and to make it a highly productive element in its economy. The sea is considered by some to be a limiting factor in the development of a nation, but the author of this reading shows that Japan has tapped the sea for a variety of resources.

To a Japanese boy or girl, a freshly caught fish placed in a bamboo basket is a valuable present. It is a gift from the sea—a gift of joy and good luck. One of the most prized sea gifts is a bonito, a tropical fish. A small piece of dried bonito neatly wrapped in a colorful envelope is most often given as a congratulations present—at a wedding, the birth of a child, or at any event that marks success or progress. Besides joy and good luck, the bonito stands for victory.

The custom of giving sea gifts began centuries ago. The Japanese people have always depended on the sea for food. It is the source of almost all their protein and provides many delicacies in the Japanese diet. For these reasons a gift from the sea is to be prized.

Fish are so important that each March a special religious service is held for them near Tokyo. People gather on the seashore

to pray for the spirits of fish that have been caught. On the following day they pray for fish that have died from natural causes.

Unlike the farmers who must contend with mountains, Japan's fishermen have geography on their side.

The Japanese coastline, for example, is very long, about 17,000 miles. This means that for each square mile of land there are nine miles of shoreline. Some stretches of the coast are smooth and sandy. But most of the shore is rocky and steep with mountains rising sharply behind it. Over the years waves have cut deeply into the rocks and beaches, forming thousands of coves, bays, and sounds. For the fishermen, these sheltered waters mean safe and easy fishing.

Then, too, the sea around Japan is one of the richest fishing areas in the world. The explanation for this lies in the wind-driven sea currents.

[†] Katherine Gallant, *Mountains in the Sea* (New York: Coward-McCann, Inc., 1957).



The people of Japan have depended on the sea since ancient times for a large part of their daily food. The annual fish catch is about 5 million tons and most of the catch is processed directly at sea in floating canneries.

The Japan current, or *Kuroshio*, is warm, like the Gulf Stream. This indigo-blue water flows northward along the Pacific side of the islands until it meets a cold current, called the *Oyashio*. When the two currents meet, they blend and begin to flow away from Japan toward North America. Their meeting, however, produces fog, sometimes fierce wind, and a great upwelling of deep water. As the currents come together, millions of tons of water tend to pile up, swirling and churning constantly.

This great activity brings to the surface billions of plankton—tiny sea animals and

plants. And plankton are what fish feed on. Because this food supply is constant, fish thrive in the area. The southbound current brings herring, trout, salmon, cod, and crab. The northbound current carries sardines, tuna, bonito, albacore, and sea bream.

The currents also bring together huge masses of seaweed, which the Japanese use as food. Dried and processed it has a pleasant, salty flavor and is an excellent source of iodine and vitamins.

The long, irregular coastline and the great number of fish nearby are the two main factors that make Japan the world's

leading fishing nation. Today, Japan's 1,500,000 fishermen—a small part of the country's 90,000,000 population—man 450,000 boats, the largest fishing fleet in the world. (The United States ranks second with 94,000 boats.) From thousands of tiny coastal villages fishermen every day go out to sea. Some of their boats are primitive, but a growing number are power-driven. Some are huge floating factories that not only catch fish but also prepare them for market.

Today, Japan's annual catch of all kinds of fish ranks first in the world. Except for a few exports of crab, tuna, sardines, and pink salmon, this huge catch is eaten in Japan.

It's small wonder that the Japanese have developed a fine taste for the flavors of different fish. They have also developed many methods of preparing fish. Sometimes it is served *tempura* style—dipped in a light batter, then fried and eaten with soy sauce. Sometimes it is salted or dried in the sun. But most Japanese prefer their fish raw.

As a fish-diet people, the Japanese have understood for centuries that as long as fish are fresh, most varieties are good when eaten raw. If you ever visit a Japanese home or restaurant, be prepared to eat *sashimi*, sliced raw fish, or *sunomono*, vinegared raw fish.

Most Japanese are fond of eating *tako*, or octopus. Boiled, sliced, and dipped in vinegar, or cooked with vegetables, this gruesome creature is surprisingly tasty. There are many varieties of octopus, from tiny ones about an inch across to monsters that measure several yards from arm tip to arm tip. Usually the Japanese choose a *tako* that measures about two feet across.

To catch the octopus, which lives on the rocky sea bottom, the fisherman lowers into the sea earthenware pots called *tako-tsubo*. He knows that if there is an octopus in the neighborhood, it will find a pot, climb in, and curl up in the comfortable interior. The next day, the fisherman simply raises the *tako-tsubo* and the catch is there.

Off the coast of Kyushu, Japan's southernmost island, some fishermen go after a dangerous-to-eat delicacy. It's the globefish, a fish that gulps air or water when attacked and puffs itself up like a balloon. Many people are afraid to eat it, for the Japanese variety contains a deadly poison. But if it is properly cleaned and cooked, it is harmless. To serve globefish, the owner of a restaurant must have a special license as proof that he knows how to clean and cook it. Many people who thought they were expert in preparing the fish have eaten it and died. In spite of these mishaps, Japanese continue to risk their lives for the tasty white meat of the globefish. Fishermen who don't want to eat globefish kill them while the fish are still balloon-shaped and then make toy lanterns out of them. The lanterns find a ready market at country festivals and fairs.

Seafood—whether it's crab, octopus, globefish, or seaweed—is not the only harvest Japan takes from the sea. Pearl oyster shells are also a valuable crop. The shiny, smooth linings of the shells are cut, polished, and sold as quality buttons. Today, as Japan gradually rebuilds her fishing fleet to pre-war size, more and more boats scout the waters for oysters with shells that can be turned into decorative buttons. Before World War II Japanese shell fishermen brought home a catch

amounting to one-half of the world's production of fine pearl shell. Now restrictions limit the fishing areas. But slowly agreements are being reached so Japan can return to rich oyster shell waters like those of Australia and South Asia.

The Japanese have still another use for oysters. They turn the shellfish into pearl factories! Normally an oyster forms a pearl when a grain of sand or some other foreign body works its way inside the shell. By treating oysters in a certain way, the Japanese can force them to produce pearls. These are called cultured pearls; Japan was the first country to make a big business of them.

For oysters to produce cultured pearls, the temperature of the water they lie in must not fall below forty-four degrees. And the oysters must lie in water shallow enough so that they can be reached easily. For these reasons the warm waters and shallow bays of southern Honshu are ideal for pearl farming.

Of the 1,200 Japanese pearl farms, Mikimoto's, on the Ise Peninsula, is the most famous. Here, as on every pearl farm, the first step is to collect oysters for "seeding." The divers who gather them are mostly women. From the rocky shoreline they plunge into the clear blue waters of the bay. Sometimes they reach depths of 45 feet. Their equipment is only a set of goggles to protect their eyes and a hook-shaped knife to cut oysters from the rocks of the ocean floor. Many of these girl divers can stay under water for as long as five minutes. Most of them come from diving families. Their positions are handed down to them, mother to daughter, generation to generation.

As oysters are gathered from the sea

they are brought to factories where they are seeded. To create a pearl, a worker very carefully pries open the oyster shell. With a tweezer-like instrument he inserts within the shell a tiny mother-of-pearl bead. Then the oyster is returned to one of the warm-water inlets. The planted bead irritates the oyster. As a result, the oyster covers the bead with layer on layer of the white, shining nacre of which pearls are made. Since it takes considerable time to form even a small pearl, oysters may remain unopened for as long as four or five years. At the end of this time they are taken out of the water, their shells are opened, and the precious pearls are removed.

Like the rice farmer who has weather and insects to battle, the pearl farmer also has enemies to fight. Octopuses, crabs, and eels regard oysters as choice eating. Also there are parasites. Cold-water currents may sweep through the bay and destroy an entire oyster crop.

Pearl farmers try to protect their crop by keeping the oysters in wire cages suspended in the water from log or bamboo rafts. Then, if danger is foreseen, the cages can be raised. Now and then the oysters may be raised so that the shells can be scrubbed free of plant and animal growth. But despite such safety devices, about 20 per cent of Japan's pearl oysters do not live to complete their life span.

Bromine and common salt are two other valuable products the Japanese take from the sea.

Bromine, a mineral, has many uses. It is used to make silver bromide for photographic film and paper. It's used in the process of making high-test gasoline. Drugstores sell bromine compounds as

headache powders and disinfectants. Large factories along the Japanese coast extract bromine directly from ocean water.

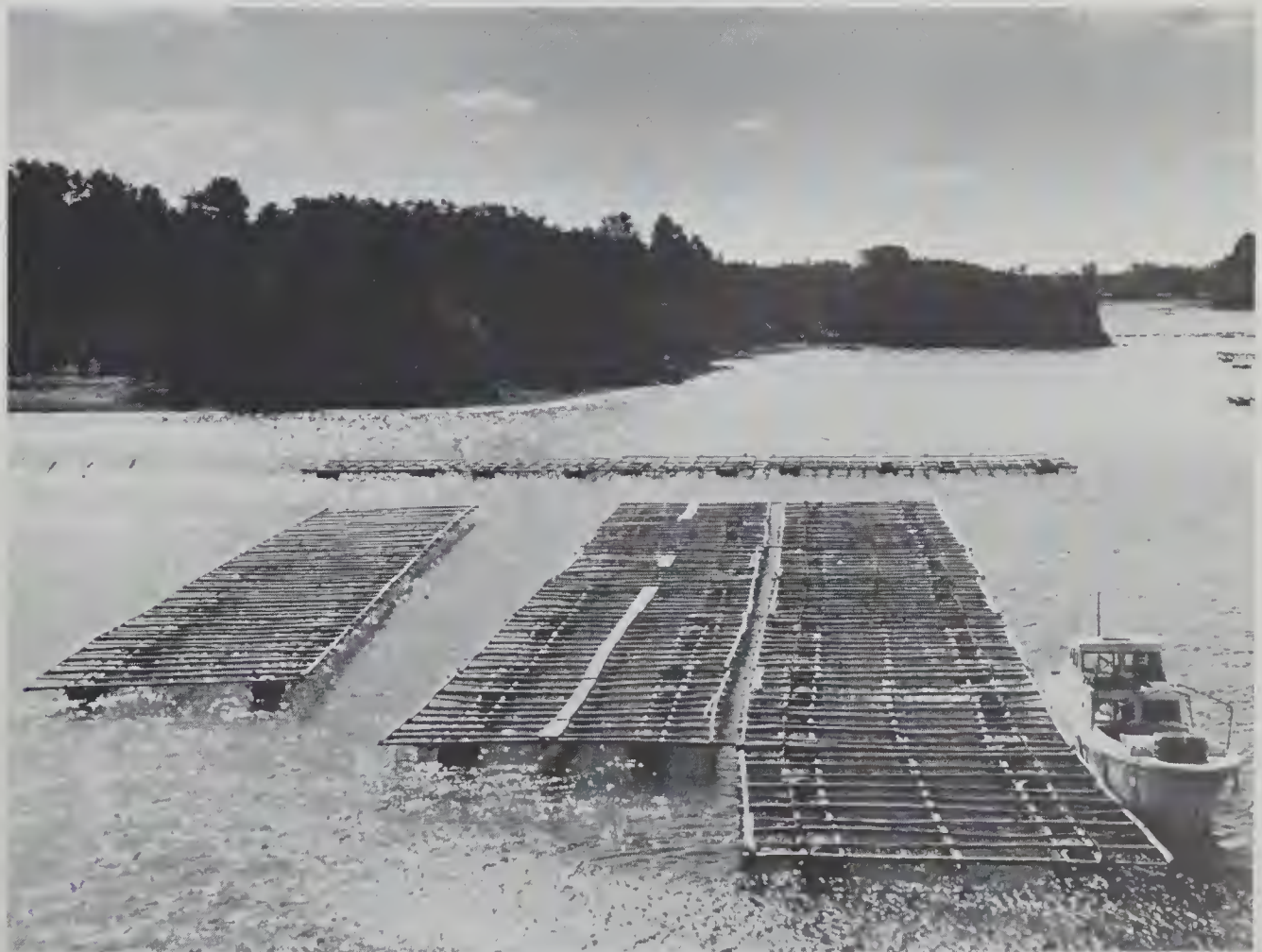
On the small salt farms dotting the coast along the Inland Sea, sea water is led into wide, shallow basins. A hot sun evaporates the water, leaving a residue of salt. But even in this area—the sunniest and driest in Japan—the climate is too damp for really efficient salt production. Rainfall is close to 40 inches a year. Part of the evaporation process must be done in pans over fires or by electrical means.

Even though more modern methods of producing salt are being introduced,

Japan's salt farmers produce only one-fourth of the salt the Japanese need. The rest must be purchased from other countries.

From other countries, too, must come huge imports of many foods. Tremendous though the yearly seafood catch is, it is still not big enough to feed the growing population of Japan.

To help solve their food problem, the Japanese have come to rely more and more on their industries. Only by manufacturing products and selling them to other countries can Japan buy the food it needs.



On a Japanese pearl farm, pearl-bearing oysters are kept in closed wire baskets suspended from rafts. Workers check the rafts periodically, lowering or raising the baskets according to changes in water temperature.

Parched Earth

Basic to any geographical awareness of a region is a sense of how the people of that region relate to the land. If the population is rural, one can be certain that land and crops and water are most important in the people's lives. If the population is urban, then other factors, not as strictly geographical, become dominant. In her novel *The Good Earth* Pearl Buck tells the story of Wang Lung and shows his utter and costly dependence on the land.

It seemed as though once the gods turn against a man they will not consider him again. The rains, which should have come in early summer, withheld themselves, and day after day the skies shone with fresh and careless brilliance. The parched and starving earth was nothing to them. From dawn to dawn there was not a cloud, and at night the stars hung out of the sky, golden and cruel in their beauty.

The fields, although Wang Lung cultivated them desperately, dried and cracked, and the young wheat stalks, which had sprung up courageously with the coming of spring and had prepared their heads for the grain, when they found nothing coming from the soil or the sky for them, ceased their growing and stood motionless at first under the sun and at last dwindled and yellowed into a barren harvest. The young rice beds which Wang Lung sowed at first were squares of jade upon the

brown earth. He carried water to them day upon day after he had given up the wheat, the heavy wooden buckets slung upon a bamboo pole across his shoulders. But though a furrow grew upon his flesh and a callus formed there as large as a bowl, no rain came.

At last the water in the pond dried into a cake of clay and the water even in the well sank so low that O-lan said to him,

"If the children drink and the old man have his hot water the plants must go dry."

Wang Lung answered with anger that broke into a sob,

"Well, and they must all starve if the plants starve." It was true that all their lives depended upon the earth.

Only the piece of land by the moat bore harvest, and this because at last when summer wore away without rain, Wang Lung abandoned all his other fields and stayed the day out at this one, dipping

† Pearl S. Buck, *The Good Earth* (New York: The John Day Company, Inc., 1931).

water from the moat to pour upon the greedy soil. This year for the first time he sold his grain as soon as it was harvested, and when he felt the silver upon his palm he gripped it hard in defiance. He would, he told himself, in spite of gods and drought, do that which he had determined. His body he had broken and his sweat he had spilled for this handful of silver and he would do what he would with it. And he hurried to the House of Hwang and he met the land agent there and he said without ceremony,

"I have that with which to buy the land adjoining mine by the moat."

Now Wang Lung had heard here and there that for the House of Hwang it had been a year verging upon poverty. The old lady had not had her dole of opium to the full for many days and she was like an old tigress in her hunger so that each day she sent for the agent and she cursed him and struck his face with her fan, screaming at him,

"And are there not acres of land left, yet?" until he was beside himself.

He had even given up the moneys which ordinarily he held back from the family transactions for his own use, so beside himself had he been. He [The Old Lord] could not comprehend the words "no money," who all his life had but to reach out his hand and fill it as often as he would.

And seeing their parents thus, the young lords shrugged their shoulders and said there must still be enough for their lifetime. They united in only one thing and this was to berate the agent for his ill management of the estates, so that he who had once been oily and unctuous, a man of plenty and of ease, was now become anxious and harried and his flesh gone so

that his skin hung upon him like an old garment.

Neither had Heaven sent rain upon the fields of the House of Hwang, and there, too, were no harvests, and so when Wang Lung came to the agent crying, "I have silver," it was as though one came saying to the hungry, "I have food."

The agent grasped at it, and where before there had been dicker and tea-drinking, now the two men spoke in eager whispers, and more quickly than they could speak whole words, the money passed from one hand to the other and papers were signed and sealed and the land was Wang Lung's.

And once again Wang Lung did not count the passing of silver, which was his flesh and his blood, a hard thing. He bought with it the desire of his heart. He had now a vast field of good land, for the new field was twice as large as the first. But more to him than its dark fertility was the fact that it had belonged once to the family of a prince. And this time he told no one, not even O-lan, what he had done.

Month passed into month and still no rain fell. As autumn approached the clouds gathered unwillingly in the sky, small, light clouds, and in the village street one could see men standing about, idle and anxious, their faces upturned to the sky, judging closely of this cloud and that, discussing together as to whether any held rain in it. But before sufficient cloud could gather for promise, a bitter wind rose out of the northwest, the acrid wind of the distant desert, and blew the clouds from the sky as one gathers dust from a floor with a broom. And the sky was empty and barren, and the stately sun rose each

morning and made its march and set solitary each night. And the moon in its time shone like a lesser sun for brightness.

From his fields Wang Lung reaped scanty harvest of hardy beans, and from his corn field, which he had planted in despair when the rice beds had yellowed and died before ever the plants had been set into the watered field, he plucked short stubby ears with the grains scattered here and there. There was not a bean lost in the threshing. He set the two little boys to sifting the dust of the threshing floor between their fingers after he and the woman had flailed the bean vines, and he shelled the corn upon the floor in the middle room, watching sharply every grain that flew wide. When he would have put the cobs away for fuel, his wife spoke out,

"No—do not waste them in burning. I remember when I was a child in Shantung when years like this came, even the cobs we ground and ate. It is better than grass."

When she had spoken they all fell silent, even the children. There was foreboding in these strange brilliant days when the land was failing them.

If one had asked Wang Lung,

"And how are you fed through the autumn?" he would have answered, "I do not know—a little food here and there."

But there was none to ask him that. None asked of any other in the whole countryside, "How are you fed?" None asked anything except of himself, "How shall I be fed this day?" And parents said, "How shall we be fed, we and our children?"

Now Wang Lung's ox he had cared for as long as he could. He had given the beast a bit of straw and a handful of vines as long as these lasted and then he had gone

out and torn leaves from the trees for it until winter came and these were gone. Then since there was no land to plough, since seed, if it were planted only dried in the earth, and since they had eaten all their seed, he turned the ox out to hunt for itself, sending the eldest boy to sit upon its back all day and hold the rope passed through its nostrils so that it would not be stolen. But latterly he had not dared even to do this, lest men from the village, even his neighbors, might overcome the lad and seize the ox for food, and kill it. So he kept the ox on the threshold until it grew lean as its skeleton.

But there came a day when there was no rice left and no wheat left and there were only a few beans and a meager store of corn, and the ox lowed with its hunger and the old man said,

"We will eat the ox, next."

Then Wang Lung cried out, for it was to him as though one said, "We will eat a man next." The ox was his companion in the fields and he had walked behind and praised it and cursed it as his mood was, and from his youth he had known the beast, when they had bought it a small calf. And he said,

"How can we eat the ox? How shall we plow again?"

But the old man answered, tranquil enough,

"Well, and it is your life or the beast's, and your son's life or the beast's and a man can buy an ox again more easily than his own life."

But Wang Lung would not that day kill it. And the next day passed and the next and the children cried out for food and they would not be comforted and O-lan looked at Wang Lung, beseeching him for

the children, and he saw at last that the thing was to be done. So he said roughly, "Let it be killed then, but I cannot do it."

He went into the room where he slept and he laid himself upon the bed and he wrapped the quilt about his head that he might not hear the beast's bellowing when it died.

Then O-lan crept out and she took a great iron knife she had in the kitchen and she cut a great gash in the beast's neck, and thus she severed its life. And she took a bowl and caught its blood to cook for them to eat in a pudding, and she skinned and hacked to pieces the great carcass, and Wang Lung would not come out until the thing was wholly done and the flesh was cooked and upon the table. But when he tried to eat the flesh of his ox his gorge rose and he could not swallow it and he drank only a little of the soup. And O-lan said to him,

"An ox is but an ox and this one grew old. Eat, for there will be another beast one day and a far better one than this."

Wang Lung was a little comforted then and he ate a morsel and then more, and they all ate. But the ox was eaten at last and the bones cracked for the marrow, and it was all too quickly gone, and there was nothing left of it except the skin, dried and hard and stretched upon the rack of bamboo O-lan had made to hold it spread.

At first there had been hostility in the village against Wang Lung because it was supposed that he had silver which he was hiding and food stored away. His uncle, who was among the first to be hungry, came importuning to his door, and indeed the man and his wife and his seven children had nothing to eat. Wang Lung measured unwillingly into the skirt of his

uncle's robe a small heap of beans and a precious handful of corn. Then he said with firmness,

"It is all I can spare and I have first my old father to consider, even if I had no children."

When his uncle came again Wang Lung cried out,

"Even filial piety will not feed my house!" and he sent his uncle empty away.

From that day his uncle turned against him like a dog that has been kicked, and he whispered about the village in this house and in that,

"My nephew there, he has silver and he has food, but he will give none of it to us, not even to me, and to my children, who are his own bones and flesh. We can do nothing but starve."

And as family after family finished its store in the small village and spent its last coin in the scanty markets of the town, and the winds of winter came down from the desert, cold as a knife of steel and dry and barren, the hearts of the villagers grew distraught with their own hunger and with the hunger of their pinched wives and crying children, and when Wang Lung's uncle shivered about the streets like a lean dog and whispered from his famished lips, "There is one who has food—there is one whose children are fat, still," the men took up poles and went one night to the house of Wang Lung and beat upon the door. And when he had opened to the voices of his neighbors, they fell upon him and pushed him out of the doorway and threw out of the house his frightened children, and they fell upon every corner, and they scabbled every surface with their hands to find where he had hidden his food. Then when they found his wretched store of a

few dried beans and a bowlful of dried corn they gave a great howl of disappointment and despair, and they seized his bits of furniture, the table and the benches and the bed where the old man lay, frightened and weeping.

Then O-lan came forward and spoke, and her plain, slow voice rose above the men,

"Not that—not that yet," she called out. "It is not yet time to take our table and the benches and the bed from our house. You have all our food. But out of your own houses you have not sold yet your table and your benches. Leave us ours. We are even. We have not a bean or a grain of corn more than you—no, you have more than we, now, for you have all of ours. Heaven will strike you if you take more. Now, we will go out together and hunt for grass to eat and bark from the trees, you for your children, and we for our three children, and for this fourth who is to be born in such times." She pressed her hand to her belly as she spoke, and the men were ashamed before her and went out one by one, for they were not evil men except when they starved.

One lingered, that one called Ching, a small, silent, yellow man with a face like an ape's in the best of times, and now hollowed and anxious. He would have spoken some good word of shame, for he was an honest man and only his crying child had forced him to evil. But in his bosom was a handful of beans he had snatched when the store was found and he was fearful lest he must return them if he spoke at all, and so he only looked at Wang Lung with haggard, speechless eyes and he went out.

Wang Lung stood there in his dooryard

where year after year he had threshed his good harvest, and which had lain now for many months idle and useless. There was nothing left in the house to feed his father and his children—nothing to feed this woman of his who besides the nourishment of her own body had this other one to feed into growth, this other one who would, with the cruelty of new and ardent life, steal from the very flesh and blood of its mother. He had an instant of extreme fear. Then into his blood like soothing wine flowed this comfort. He said in his heart,

"They cannot take the land from me. The labor of my body and the fruit of the fields I have put into that which cannot be taken away. If I had the silver, they would have taken it. If I had bought with the silver to store it, they would have taken it all. I have the land still, and it is mine."



The Mekong River

The Mekong River, which flows through several Asian countries, including China, Thailand, and Laos, has vast agricultural and economic importance. Because several countries border on the Mekong and because it is difficult to get nations to cooperate in taming it, the potential of this great river has hardly been used. The book *The Lower Mekong*, from which this reading is taken, proposes an ambitious international program for the development of the resources of this sleeping giant.

Like many Asian rivers, the Mekong is very different in various places, ranging from a mountain torrent where it begins in the Himalayan uplands, to a broad, sluggish, mud-filled river in its vast delta. This diversity of the river requires diverse human methods for harnessing its resources for agricultural and other uses.

One of the great rivers of Asia, and indeed one of the ten or fifteen largest rivers in the world, the 2600-mile-long Mekong (or Lan-Tsan-Kiang as it is called in its upper reaches) rises at an elevation of about 16,400 feet in the snow-covered mountains of the great Tibet Plateau, where the Yangtse and Salween also have their sources. It flows in a generally southerly direction between the mountain ranges of Yunnan Province in China, and comes into the Indochina Peninsula at the common border point of China, Burma, and Laos. For some 130 miles it is the border between Burma and Laos, here entering its

Lower Basin. From the common border of Burma, Laos, and Thailand it flows on southward for a short distance as the border between Laos and Thailand, then within Laos, then again for over 500 miles as the Lao-Thai border, then across the southwest tip of Laos, then across Cambodia, then across the southern part of Vietnam until it discharges in the South China Sea near Saigon.

The Lower Mekong referred to in this study is the river from the Burma border to the sea. It traverses some 1504 miles just in this Lower Basin. Of the total drainage area of the river, amounting to an

† C. Hart Schaaf and Russel H. Fifield, *The Lower Mekong* (New York: D. Van Nostrand Co., Inc., 1963).

estimated 307,000 square miles, some 77 per cent, or 236,000 square miles, lies within the four countries of the Lower Basin, which is thus an area larger than the states of New York and California combined, or larger than France.

In its upper reaches the Mekong is a wild river. In the Lower Basin, it is a good deal more placid, though there are rapids at a number of points, and one falls—the Khone Falls—in Laos just north of the Cambodian border.

The Lower Mekong Basin embraces the hills and mountains of northern and southern Laos, the semiarid plateau region of northeast Thailand, the forest lands of the Mekong plain in Cambodia, and the delta from Kompong Cham in Cambodia down through Vietnam to the sea.

What are the potentialities of the Lower Mekong? Here is what a group of engineers of outstanding experience and reputation in river development headed by Lieutenant General Raymond A. Wheeler of the United States, invited by the United Nations to survey the river's possibilities, had to say in 1958:

The Mekong is a majestic river. Even a cursory examination of the available hydrologic and topographic data, meager as it is, has convinced the Mission of the great potential of the Lower Mekong for service to the riparian countries in the fields of navigation, hydropower generation, irrigation and other related water uses. Since it is a snow-fed river, the Mekong has a perennial flow. The possible hydropower sites are easily accessible and are located within reasonable distance of potential load centers. The topography of the basin appears to be suitable for diversion of the river flow for irrigation of large tracts of land. The control of its floods and improvement of drainage can be accomplished with reason-

able works and in most instances could be combined with its development for other purposes. Thus developed, this river could easily rank with Southeast Asia's greatest natural resources. Wise conservation and utilization of its waters will contribute more towards improving human welfare in this area than any other single undertaking.

The most striking aspect of the Lower Mekong, however, is not the size and length of the river, nor its potentialities, but the extent to which these resources have been left untapped.

Millions of people live in the Lower Mekong Basin. They travel about on the river, mostly in very small boats. They fish in its waters. But in terms of man-made engineering structures, almost nothing has been undertaken—until very lately—to exploit it. Hydroelectric power has not been developed anywhere either on the river or its tributaries, at any point in the basin. Of the total area under cultivation in the Lower Basin, only some 2.7 per cent or 380,000 acres is irrigated, and even this limited amount is in a series of very small-scale projects. A network of drainage and navigation canals in the delta west of the river is the most extensive hydraulic work so far undertaken. Considerable work has been done in marking the channel in the mainstream to aid navigation, but channel improvement has been limited.

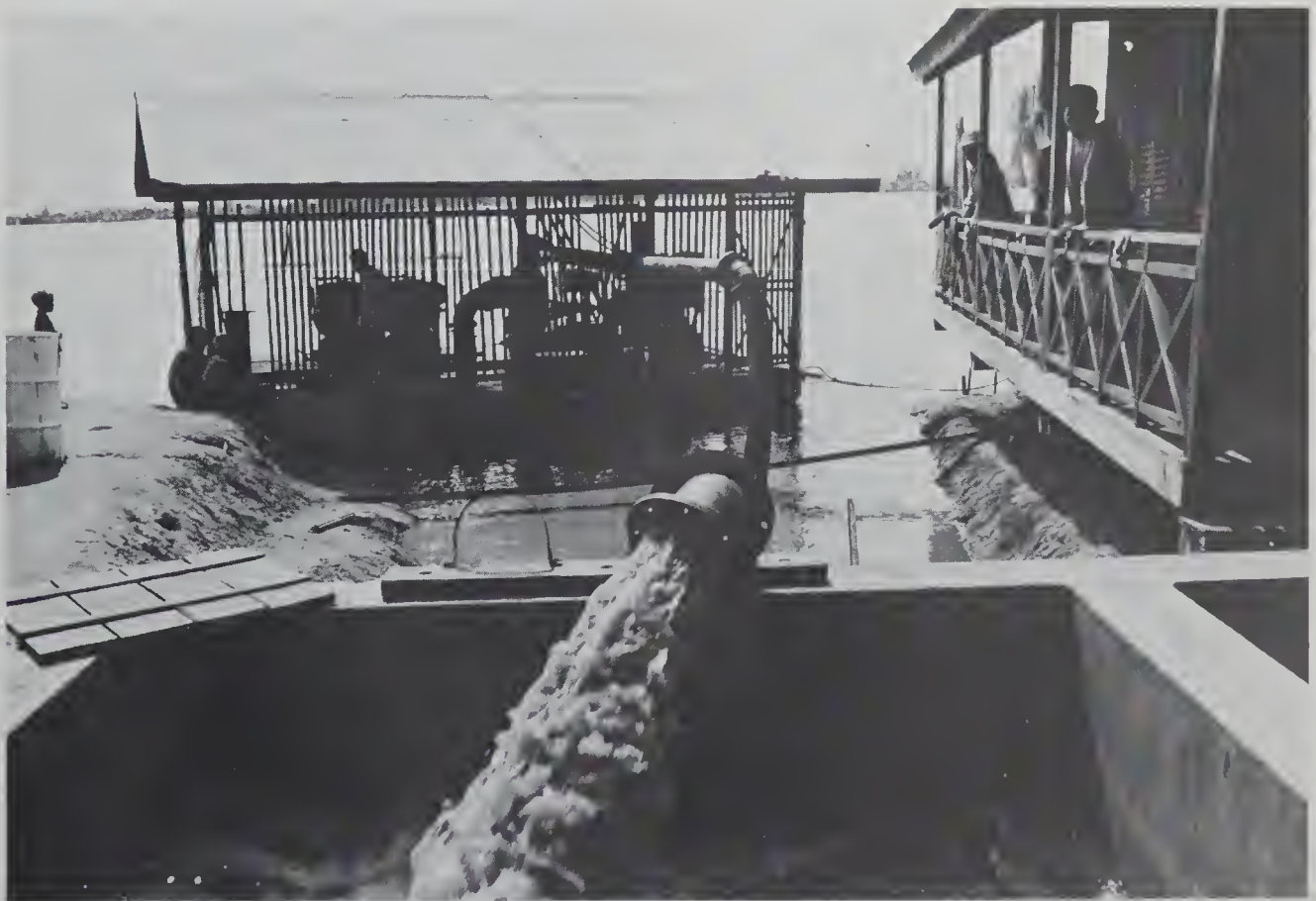
No bridge has ever crossed the Lower Mekong at any point.

Outside the orbit of the Mekong Scheme, numerous other economic developments have been and are being carried out in the area, especially during the past decade. Each of the four riparian governments is energetically pushing development in a

wide variety of undertakings. The United Nations and its Specialized Agencies extend technical assistance to all four countries; the UN Special Fund is undertaking projects in some of them; and all four, as indicated, are included within the work of enquiry and recommendation of the Economic Commission for Asia and the Far East. France operates a mission for economic and technical assistance in Laos, Cambodia, and South Vietnam. The United States participates in a substantial economic cooperation program in each of the four riparian countries. Australia, Canada, Japan, New Zealand, and the United Kingdom are included in those extending aid through the Colombo Plan. Belgium, China, Czechoslovakia, Denmark,

Germany, Israel, Italy, the Netherlands, Poland, and the USSR are involved in technical assistance activities in one or more of the four riparian states; the Philippines has its operation Brotherhood in Laos; the Asia Foundation, the Ford Foundation, and Medico also provide aid in some of the countries. While many of these programs are involved in the Mekong Scheme, the efforts in projects not part of the Mekong Scheme have amounted to very much more than the total effort thus far involved within the Scheme.

The Lower Mekong has thus been a giant asleep—a source of tremendous potentialities for power production, irrigation, navigation, and flood control, but a source virtually unutilized.



This pumping station on the Mekong River lifts water into the irrigation system of an experimental farm in Laos.

Asian Man and His Environment

Man has never been indifferent to his environment for he is a creature who must respond to it fully and continually. In Asia, he has long sought and found means of modifying it so that it would be more productive. The readings in this section deal with the various ways in which the Asian has chosen to confront his physical surroundings. The control of water is given special emphasis because of the dominant role such activity has played in the history of Asia. Although physical factors alone do not determine Asian cultural patterns, a major question to consider in studying these readings is: What choice do people have in adjusting to their environment?





An Irrigation Project for Hunan

This reading is a short article from the Chinese Communist magazine *China Reconstructs*, a collection of reports on progress in Communist China. The magazine stressed the importance of the thought of Mao Tse-tung on the lives of all Chinese. This particular article reports how Mao's thought was applied to the construction of one of the many irrigation projects undertaken by the communes and labor forces of the People's Government.

Control of water, for purposes of irrigation and flood prevention, is one of the most striking evidences of the ability of Asian man to control his environment. Such skill has contributed significantly to the cultural excellence of the Chinese throughout history.

East-central Hunan, where Chairman Mao Tse-tung was born, has fertile soil and a warm climate. But rainfall is sparse and irrigation difficult because most of the land is hilly. For that reason the area has never had good farm yields. Now a new large irrigation project brings water from the upper reaches of the Lienshui River through a canal which serves the highlands of three counties, irrigating a million *mu*¹ of land.

The biggest water project in Hunan to date, the Shaoshan area irrigation network, is a considerable feat of engineering. In the hills upstream, it dams the waters of the Lienshui in order to raise their

level, and leads them by gravitation across the highlands. The main canal and its branches total 174 kilometres in length. It goes over 73 hills, through 7 tunnels, across many valleys—some of which have been filled up with earth to the height of 10 metres—along ledges cut 20 metres deep into the cliffsides, and over 19 streams by way of aqueducts.

The largest of the aqueducts, at Chuchintu, is 530 metres long and made of reinforced concrete, resting on supports as high as a three-story building. Here the aqueduct crosses the winding river itself. Another aqueduct at Shengchiachung, called the "river in the sky" by the local people, crosses a railway and highway.

1. A *mu*, or *mou*, is one-sixth of an acre.

† Chiang Yang-chun, "Big Irrigation Project for Hunan," *China Reconstructs*, Vol. XV (August, 1966).

The canal is navigable by boats up to 20 tons.

The project has a total of 1,300 big and small units of construction, such as aqueducts, locks, culverts and bridges. It connects many small reservoirs and ponds which were formerly of limited use into a huge water conservation and irrigation network. Much newly-acquired equipment such as electric pumping stations, water turbine pumps, hydraulic rams, siphon systems and boats with electric or diesel engine pumps are now working there. Though mainly for irrigation, the project is also a boon for power generation, navigation and fish breeding. It was completed only ten months after the work began.

What Made It Possible?

How was it possible to do a good job on such a large and difficult project within such a short period? The most fundamental reason is that Mao Tse-tung's thought was in command on the entire project. From the beginning, the aims were to: Give prominence to politics, arm the construction workers with Mao Tse-tung's thought and lead them to revolutionize their thinking. At the worksites, studying Chairman Mao's works became a mass activity. The workers held discussions on how to apply Chairman Mao's thought to their work. After firmly embracing the idea of "building the canal for the revolution," they found the courage and wisdom to conquer all difficulties. Thus they dared to climb precipices, tunnel through big hills, break giant rocks and brave the swift currents.

An assemblage of peasants with not much technical skill was formed into a construction force with infinite creative power. They drilled tunnels through difficult mountains; even the construction team with the least technical ability learned to build an aqueduct on high supports. In the course of construction, they used Chairman Mao Tse-tung's viewpoint and method to direct and arrange the whole campaign. As a result, manpower and materials were put to the most reasonable and most effective use.

Another reason was the superior organization of the people's communes, which made it possible to go ahead with the project at this time and to do it economically and quickly. More than ten million yuan² in funds and 4,000 skilled workers were supplied by the provincial people's government, but the manpower, which is the most important item in a construction of this type, was provided by the people's communes themselves. When word spread that the canal was to be built, the people were overjoyed and fought to be first to volunteer for the work. The communes in the area soon organized a labour force of 100,000.

The people met with many problems, but they overcame them one after another. At a place named Hohuapai, a ledge for the canal had to be hewn out of the side of a rocky precipice. But the stone was so hard that a swing of the pick produced only sparks and a tiny mark. Moreover, the men had to suspend themselves by ropes over the side of the cliff in order to work. Where they could not make headway with picks, they blasted, but even making holes for the dynamite was diffi-

2. Chinese dollar.



These Chinese peasants on a commune in Hunan province are building by hand a reservoir which will irrigate 6.4 square miles of farm land.

cult. Sometimes this was impossible, and they had to insert crowbars in the fissures of the rocks and prize [sic] until a piece was loosened. It took them five months to cut a 300-metre-long ledge for the canal.

Another difficult section was the 992-metre-long tunnel at Tsaolin-chung, longest of the whole project and made through a very complex earth and rock structure. In order to do it quickly, the peasants sank three shafts down 28 metres from the top of the mountain to the level of the tunnel, and from the bottom of these proceeded to dig the tunnel. This gave them six additional work-faces. Thirty-two members of the Sanhsienao commune worked on them three shifts a day. The

farther in they went the less air they had and the worse the smoke from the explosions became. Having no mechanical blowers, they brought bellows from their homes and with them sent fresh air through hollow bamboo tubes into the shafts. They lighted their way by kerosene lamps and flashlights, lifted the rubble up the shafts with home-made windlasses.

There were more than 70 sections as difficult as these mentioned above, but one by one the huge enthusiastic labour force conquered them.

"The mountains do our bidding, the water flows at our will," the commune members said exultantly when they saw what their collective strength could do.

When planning the course of the canal, the designers discussed the layout for each section many times with the commune members. The latter made many good suggestions that saved labour and enabled the canal to take up less good farm land than originally expected. The course of the left trunk canal, for example, was changed in seven places to flow along hillsides or through the hills. This saved a great deal of earth and stone work and retained 80 *mu* of fields.

The commune members also thought up ways to make the construction work add to their farming area. One example is from Tsaolin-chung, where digging for the canal displaced 300,000 cubic metres of earth. If this had been dumped on either side of the canal, it would have covered up 480 *mu* of farm land belonging to six production teams. Instead, the commune members deposited the earth on hill slopes several hundred metres away and with it built up 162 *mu* of terraced fields. When the 68 *mu* of land taken up by the canal itself are subtracted from this, they still have 94 *mu* more than before.

As construction went on, a lively campaign for technical revolution began on all the worksites. The commune members invented new methods of transporting by overhead cables and windlasses, and spread the use of many kinds of improved equipment, such as the mechanical earth tamper. In the Hutien district, five hills had to be levelled and seven gullies filled up on a section of the canal less than two kilometres long. The commune members began with only shovels and baskets car-

ried on shoulder poles, but as they went on they began to think of improvements. A young man named Chou Shou-sung remembered once seeing a woman drawing water from a well several metres deep with a long pole resting on a fulcrum. Applying this principle he and Chiang Tshsin, another commune member, constructed a simple crane which could lift stones from deep pits easily and safely. Within a few weeks the 1,200 commune members from Hutien made 1,800 proposals for innovations and produced 300 kinds of new or improved tools.

The skilled workmen sent by the people's government had their own campaign for technical innovation. One of their contributions was at the Chuchintu aqueduct. The body of the channel was to be made of 22 prefabricated sections of reinforced concrete, each weighing 120 tons. These had to be raised high in the air and set down exactly in the right place on the high supports.

The workers in charge of this, who were from the construction team of a large hydro-electric station in the province, had never lifted anything so heavy, and had brought only four hoists and other fairly simple equipment. Tang Tse-min and Chu Kuo-chu, the technicians with the team, searched through many books for the answer but came up with nothing they could use. Then they began discussing the problem with the workers. The latter proposed four plans, one after another. These were tested by a group of leaders, workers and technicians working together. They chose the best plan and put it into effect—one combining both modern and familiar locally-used methods. With it, the aqueduct was completed in eight months.

The Entire Province Helped

While the people's communes were the main force for building the project, they received much support from all sides. Provincial machine-building plants produced scrapers and other earth-moving equipment, frames for gantry cranes, and the arc-shaped sluice gates rapidly and well. Many factories and mines sent their equipment and skilled workers to help in the technical movement. Materials for it had priority on road, rail and waterway shipping. The commercial network set up a hundred retail shops along the canal and organized stalls to provide the worksite personnel with a steady supply of articles of daily use. The worksites had their own medical workers, and cultural troupes came to perform there.

The whole province put its shoulder to the wheel, eager to provide the conditions for good crops and happy to be able to

beautify the area around Shaoshan, birthplace of Chairman Mao.

When the Shaoshan irrigation area project was officially opened, people had a dual reason to celebrate—the completion of the construction itself and, more important, the great number of workers trained and the rich experience gathered in this “school” with Mao Tse-tung’s thought in command. During the ten months, the political consciousness of the peasant-workers was greatly raised. Over 600 of them joined the Communist Party, 10,000 young people joined the Communist Youth League, and 41,000 people were rated as excellent workers. More than 5,000 workers mastered one or several technical skills useful for building water conservation projects. The good ideology, good spirit, good experience and good skills gained on this worksite will have far-reaching influence as the workers return to their villages or go on to other construction sites.



The countryside around the house where Mao Tse-tung was born, in southeastern China, shows radical land improvement.

Reclaiming Dead Land in China

Traditional viewpoints in geography suggest that man and his society are shaped to a great degree by their environment. This philosophy has been applied both to Asia and to the rest of the world. However, as man has developed more sophisticated means of understanding his environment and his history, new perspectives on the relationship between man and nature have arisen. As one would expect, some people believe that man is completely independent of his surroundings, whereas others suggest that a mixture of influences affect his development.

The Chinese Communists attach great importance to the power of man's thought and action in transforming the land. They believe that the Chinese people, armed with patriotism and faith in the Communist Party of China, can conquer even the most inhospitable of environments. This short essay from a Chinese Communist literary monthly is a good example of such belief.

My destination was the East Sea coast, due south of Maleh Bay, and here I was.

Before I came here I was told that you could walk that eastern coast in the rain without leaving footprints and after the rain a layer of frosty salt soon appeared on the surface. It was barren alkaline land, an expanse of white all the year around, white for scores of years. But whether white or black it was still land, a vast tract stretching as far as eye could see. How many farmers it fired with daring dreams!

And twenty years ago a farmer named

Li-pen, driven by famine from his native home, brought his old parents and six children here. The landlord told him, "Till this land, and I won't charge you rent for the first three years." Li-pen looked at this vast white expanse, his heart beating fast, his face flushed in anticipation. Three years without having to pay rent! If he could improve the soil a little the first year, in the second year and the third he could do better. Beautiful visions of his six children's future flashed before his dazzled eyes. He was well aware that others

† *Chinese Literature* (Peking: Foreign Language Press, June, 1965).

before him had failed here. Still he stooped to taste a pinch of the soil, which was salty and bitter. However, he was strong and determined enough to take a gamble on this vast pitiless stretch of white coast. He pulled down his old house and rebuilt it by the seaside. Nearly everyone in his family worked on the land. He sold whatever they had of value to get a little money to buy fertilizer. In a word, he staked the lives and property of their family of ten on this land. He brushed aside all warnings and advice, trusting to his own hard work, convinced that any land warmed by the sun and washed by the rain and dew must produce good crops if only enough hard work was put into it.

The tides ebbed and flowed. In quick succession three years came to an end. The eastern coast was still a stretch of white. The only difference was that a small plot of land bore cotton stems no thicker than chopsticks. Li-pen was reduced to skin and bones. For three years the whole family had had to subsist on the crabs and rhubarb roots which Hai-ta, his fifth son, caught and dug up on the sea-shore.

When the three years were up, Li-pen and his family pulled down their house and moved away. Before leaving, Li-pen gazed at the coast with tears in his eyes and said: "My strength and money are gone, I can do no more. But I'm sure this land could grow crops."

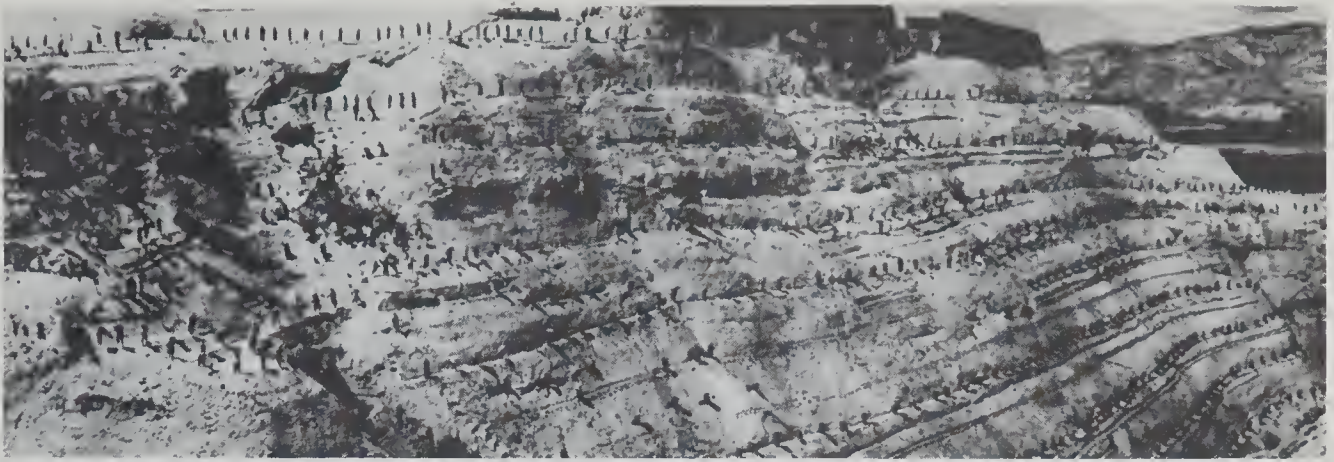
Now a pioneer team made up of young members of the people's commune was farming this stretch of coast. Apart from growing cotton, wheat, melons and paddy on the white alkaline soil, they had raised fish and planted fruit trees. Last of all I was told that the team leader was Hai-ta, Li-pen's son, who had once again rebuilt

his house, the only property his father left him, by the seaside. The young folk had set up a new village there.

A flock of white seagulls suddenly took flight nearby and whirled with slanting wings over my head. In front of me glittered a white belt—the sea. I half ran to the shore and there I saw two seas. One with dazzling waves and white sails in the distance, the gulls overhead looking like stars that somebody had scattered in the sky. These faithful companions of all navigators were drifting with wings unfurled from this sea to another: a rippling green sea of wheat. It was early spring. The wheat had not ripened yet. Nevertheless, the field was a sea of green stretching to the azure sky. Clouds were scudding before the wind. The East Sea seemed to be booming: "This land could grow crops." No, it was not the voice of the sea but that of Li-pen and Hai-ta, the voice perhaps of two generations of peasants.

I wanted to meet Hai-ta and the rest of his team to see if they were as husky as I imagined. But where did they live? Was that an island beyond the green sea? No, it was a shelter belt, behind which a mass of peach blossom or apricot blossom showed pink.

In front of the blossoming trees I found the team's headquarters. But nobody was in. It happened to be their day off. The few stockmen who had stayed to feed the animals told me that Hai-ta and the others would be back that evening and led me inside a very small office. I sat down behind a desk by the window, my head touching the loudspeaker hanging on the wall. It occurred to me that this small house might be the very one that had been pulled down three times and rebuilt by the seaside.



An army of 150,000 people labored on this soil conservation project in northwestern China.

Through the window one saw the boundless sea. Looking at the green sea in the dusk, my mind turned to Li-pen and Hai-ta. I wondered what magic Hai-ta had that he was able to make the goal for which his parents had vainly risked all they had, including their lives. The green sea became a dark blur and a solemn march struck up, softly but clearly. I found it was coming from the loudspeaker behind me; the commune was broadcasting the day's last programme of music. Just then, bicycle bells rang outside the gate. The members of the pioneer team were back, Hai-ta among them. A short young fellow with full lips and a lock of hair falling forward over one eyebrow, Hai-ta did not quite fit my conception of him. And I bombarded him with so many questions that at first he was at a loss as to where to begin. After a while he said in all seriousness: "In the autumn of 1958 the Youth League of our commune called on us to organize a pioneer team. More than forty young men volunteered. Later they elected me to be the team leader. . . ." When he started, his comrades listened to him out of curiosity, but soon enough they went to another table and started a game of cards,

since Hai-ta's account held nothing new for them.

"When we arrived here, we planted wheat. The next year we reaped an average yield of. . . ." He took out his notebook to check up the figure. He was giving me an accurate, detailed survey when the "battle" at the other table reached a climax. The onlookers were shouting advice, some were even grabbing at cards. The packed office was seething. Those originally seated had leapt to their feet and their places had been promptly seized by others. It was difficult to distinguish the players from the onlookers. A gay party was under way.

It was hard to concentrate on what Hai-ta was saying, but I could hardly drop the subject I had just raised. I asked: "What was your biggest difficulty?" Hai-ta had no answer ready. Smiling at me and scratching his head he began to think hard. He looked as if this were the biggest difficulty he had yet faced.

"Believe me, two extra batteries will make the sound louder," said one young fellow to another. The two of them were fiddling with the loudspeaker.

"I know how to do it. Just tighten that thing there and it will improve the vol-

ume," said a youngster with tousled hair. And no sooner said than done. After a sudden shriek the loudspeaker was silent. Though nobody had seemed to pay any attention to the music before, now that the loudspeaker had ceased to make any sound everybody noticed it. All turned to look at the youngster with tousled hair who flushed in embarrassment. Silence reigned in the room.

"Oh, I know the difficulty." Hai-ta had found one at last. "When we first came here there was no fresh water. Our porridge tasted bitter."

"How did you get round that?" I asked.

"Get round it? By digging a canal." Hai-ta seemed surprised that I should not know how to solve this problem of water. And he added, "By bringing in fresh water from Maleh Bay. We killed two birds with one stone—got ourselves drinking water and a good means of transport." He spoke of digging a canal as if it were the easiest thing in the world, like building with toy bricks. So that difficulty was no difficulty at all. I asked, "Had you no other difficulties?"

"Of course we had," said a tough-looking young man who had just been defeated in the card game, before Hai-ta was ready to reply. "Soon after we arrived here there was a typhoon and downpour. The straw on our thatched huts was blown off like willow-down. We stayed indoors holding up umbrellas."

"The cooking was the best part to watch," put in another.

"Ha, at that time we had this wretch as our cook." The tough card-player patted the head of the lad who had been trying to repair the loudspeaker. "He behaved like the king of all cooks. When it rained

he made three men hold umbrellas for him. One for the cooking pan, another for the firewood, and the third for His Majesty's head. Imagine what a lively time we had."

I was so impressed by their youthful, revolutionary optimism that I wanted to spring to my feet and pay some tribute to these fine youngsters. But they had talked only about their living conditions. How about the land? How had they made it yield?

"How could it help but yield?" said the tough young fellow quickly before any of the others could get a word in. "Tractors came round the beach and roared up and down the whole farm. When we wanted fertilizer, boatfuls came. Sheep and cattle were grazed here to give us more manure. Now we have all the fertilizer we need, chemical or natural. A small heifer we brought with us then will soon be a grandmother."

Suddenly the loudspeaker came to life again and the first line of the song it broadcasted was: "The people's commune is fine."

"The people's commune is fine." The volume had certainly increased. Everybody cheered. The young repairer smiled, wiping the sweat from his forehead, happiness written on his face. Hai-ta nodded at me, grinning, as if to say, "You see what we are like here. Nothing else to speak about."

Outside the wind was sweeping over the green sea. The wheat was shooting up, the fruit trees were blossoming. A voice seemed to be saying, "This land could grow crops." Another feeble voice said, "My strength and money are gone, I can do no more." Above both these voices I heard the song growing louder and clearer: "The people's commune is fine."

A Water Myth in the Philippines

In the wake of the Spanish-American War of 1898, the United States suddenly found itself a colonial power with the island nation of the Philippines under its control. This was a new frontier for America, and our country launched an active campaign to meet its colonial responsibilities. One of the most difficult things for Americans to adjust to in their relations with the Philippines was the totally different geography of the island realm. The climate, soils, and topography of these islands all were very different from those of the United States. One of the men who did much towards overcoming this ignorance was Dr. Victor Heiser. In this selection from his book, *An American Doctor's Odyssey*, he describes a basic problem that Asian man has in making proper use of water.

Cholera has been one of the great scourges of modern times. At four different periods in the nineteenth century it was pandemic. In the sixties it was taking toll through large parts of the United States. Terrified England was twice swept by the disease.

Seven great epidemics since 1820 ravaged the population of the Philippines. When the deaths in Manila reached a thousand a day, not enough people could be found to bury the dead. Nightly the streets to the cemeteries were blocked. The priests, leading the religious processions of atonement, could with difficulty find a path through the calesins,¹ carromatas,²

and slow carabao³-drawn carts, all bearing the dead for burial.

Mediaeval theologians had taught that all illness and deformity were manifestations of divine wrath; plague, pestilence, and famine were visited upon the people for their transgressions. Where this doctrine had become powerful enough to regulate the life of the Christian world, the progress of medicine had come to an almost complete standstill. The Filipinos were still living in this mediaeval atmosphere; they were resigned to their angry God, were used to his punishments, and preferred their own ways to those of strangers.

1., 2. Carts.

3. Water buffalo.

† Victor Heiser, *An American Doctor's Odyssey* (New York: W. W. Norton & Company, Inc., 1936).

Beyond establishing free medicine stations, the Spanish authorities had been powerless. Instead of taking those simple measures of health and sanitation which would have prevented these destroying epidemics they had bowed their heads and prayed while the death rate mounted to its inevitable peak.

When the Americans came, they were not disposed to tolerate such resignation. Because they had to protect their troops, they decided that something must be done about cholera. March 3, 1902, the attention of the Chief Quarantine Officer at Manila was called to the existence of Asiatic cholera in Canton. Five days later came news of it at Hongkong, from which large quantities of fresh vegetables were constantly being shipped to Manila. In the effort to ward off infection, the port authorities at Manila immediately placed an embargo on low-growing vegetables. This step was necessary because the Chinese were accustomed to sprinkle human excreta in liquid form on growing cabbages, not only for fertilizer, but also for protection against insect pests. If cholera were present in the vicinity, it was always possible that each fresh, crisp, tender leaf would enfold a myriad cholera germs.

Under the terms of the embargo, a large shipment of cabbages from Canton was refused, and the angry shipmaster thereupon dumped the cargo into Manila Bay and sailed off, leaving the surface of the water literally covered with the bobbing heads. From the nipa⁴ huts of Farola, Tondo, and Meisic, the Filipinos swarmed to the water front, launched their praos⁵ and bancas,⁶ and went fishing for cab-

bages. They welcomed the succulent vegetables as manna.

In the light of subsequent knowledge it is doubtful whether cholera entered the Philippines in this way. There is no doubt, however, that one of the most terrible epidemics of modern times had begun. A few days later two cases of cholera were admitted early in the afternoon to San Juan de Dios Hospital, through whose ancient portals so many thousands had preceded them. Before the day was over, two more arrived. Within forty-eight hours doctors and nurses were rushing about distractedly trying to find beds in which to put the sufferers.

Responsibility devolved upon Secretary of the Interior Worcester. He was a man of magnificent physique, respected by the Filipinos for his size and courage, but feared and disliked for his personality. He was brusque, and did not ask for co-operation; he demanded compliance with his orders. He always insisted that the established sanitary fact of the morning must be the rule to be observed for the evening. In following out what he considered right, he paid no heed to Filipino public opinion.

Worcester was taking vigorous steps, and cholera was not claiming so many victims as in Spanish days. The more ignorant of the populace, therefore, said this disease could not be cholera because not enough people were dying. Many Spanish and Filipino physicians, who, under the old régime, had been the most influential class politically and socially, jealous of the authority of the Board of Health, criticized its measures and fanned the antagonism of the people.

A land quarantine was established

4. Palm tree leaves.

5., 6. Light embarcations.



Man must become aware of the dangers presented by his environment in order to control it effectively. In southern Asia many diseases come from polluted waters used for bathing and drinking.

around Manila in the effort to keep the disease from the provinces. In the state of resentment over what seemed the dictation and ruthlessness of a military occupation, the Filipinos could not comprehend the theory of paternalism which said, "We are doing this for your own good." Eluding the futile cordon at night, or slipping across the fields by day, people already sickening of the disease escaped to start new foci of infection.

Within a few weeks seven thousand temporary employees of the Board of Health were in the field. But the force was new and untrained, and undoubtedly in exercising its duties it was guilty of discourtesy and even abuse of power.

The Farola district, a narrow neck of land along the Pasig River running out into the Bay, covered with warehouses, coal piles, and a crowded mass of small filthy nipa huts, was the apparent focus of the disease. Worcester ordered it evacuated and burned. Under a blazing sky the terrified and resentful owners watched the shooting sparks as shack after shack crackled and collapsed. The report spread about that the homes of the poor were being burned to make room for future dwellings and warehouses of rich Americans. Further rumors that the foreign doctors had poisoned the wells were also widely credited; it was even said the American aim was to annihilate the Filipino race.

It was true that, in the effort to stop the spread of infection, the Americans sometimes may have overridden the private rights of individuals. Uniformed men clattered up with ambulances and without ceremony lifted the sick from their mats and carted them away from their wailing families. The husbands, wives, and children could not understand why they were forbidden to follow. Four times out of five this was the last they ever saw of their loved ones until shortly they received a curt notice to come to the hospital and claim their dead.

The severity of this treatment gave rise to even more extravagant rumors. It was said that in the detention camps where contacts were segregated all sorts of horrible abuses were being perpetrated, and at the emergency hospitals the sick were being deliberately murdered.

The state of popular apprehension amounted to hysteria. Whenever possible, the sick were concealed by their families and the dead thrown into the esteros⁷ or the Pasig River or the Bay, thus adding further poison to the already poisonous waters.

Measures were taken to control sea traffic. All vessels leaving Manila were quarantined five days at Mariveles, and for a longer period if cholera broke out. A water patrol was established on the Bay, but here also many small boats evaded the watch. At the time of my arrival the emergency was so great that the quarantine service was extended to cover the Manila waterways.

The people were often, in their pitiful ignorance, hastening their own destruction. One morning I came down to my

7. Canals.

office. My first glance, as always, was towards the big map on the wall. I was startled to see that, according to the arrangement of the colored flags which marked the location of every case, cholera had suddenly burst forth in little isolated groups all over Manila.

An investigation was begun at once. This soon revealed that two days earlier a fisherman had come in from the Bay with a marvelous story of how he had seen bubbles rising in the salt water which, as they rose, formed the vague outline of a great cross. He had tasted the water and found it sweet. Crossing himself, with wonder in his heart that he had been chosen to discover this portent, he paddled furiously to land. Others, at first incredulous, tasted and then believed. The fisherman escorted to the spot a priest, who blessed the water and declared it a miracle. The Filipinos were such ardent seekers after wonderworking that they would cry out "I believe" when any prophet proclaimed, "Lo! A Miracle!" Dwellers along the shore poured themselves out on the Bay in anything that would float and eagerly scooped up the holy water in bottles, jugs, pans, and pails.

Together with the Manila health officials I was soon on a launch, which nosed its way through the conglomeration of native craft. A glance was enough to show us that this was no miracle but a dire calamity. The sewer line, which emptied far out in the Bay, had broken. If access to the miracle were shut off immediately, we knew that, in the prevailing state of incipient rebellion against health measures, the believers would feel deeply outraged and would be ready for any violence; the health service would be attacked for interfering

with divine providence itself. On the other hand, action was imperative if cholera were not to run riot in the town.

We went to the Governor General and asked for constabulary to patrol the area and keep the people from committing mass suicide. Instead of acceding immediately to our request, he hesitated. "It's quite possible there'll be a minor insurrection if I do this," he urged.

"It's quite certain there'll be a major catastrophe if you don't," I retorted.

"Well, I don't know," he drawled. I was well enough acquainted with the Governor's legal turn of mind to realize that he was weighing all contingencies before making a decision. To me there could be

no question as to the necessity, and, moreover, speed was of the essence.

"We are advising you in the strongest terms that the constabulary be called out. The situation is serious, and if you want to assume the responsibility, we can't do anything further about it. But we want to have it plainly in writing that it is you who are responsible."

We could state our position no more plainly.

The Governor did realize the danger, the police and the constabulary prevented the collection of the water until the sewer was repaired, and, on this occasion at least, the disturbances which ensued were of only a minor character.



Many Asian countries are making progress in raising the health standards of their people. These Indian villagers are about to receive inoculation against tuberculosis. A sign says: Inoculation is completely harmless.

Violence Among Villagers

One of the obvious results of the decision of Asian farmers to attempt to control and fully use water is the need for continual close cooperation with each other. There are times, particularly during low-water periods, when such closeness breeds violence. This selection, which tells of such violence, is taken from a study of a village in central Formosa (Taiwan) in the later 1950's. The village is a small agricultural settlement which lies adjacent to a larger settlement that has an important water-pumping station for irrigation canals. This reading shows how control of water binds people together in Asian society, and also how political and social power relate directly to control of land and water.

Early in the spring of 1958 a Hsin Hsing villager and his elderly father were severely beaten in their fields by two men from the neighboring village of Ta Yu. The reason for this was that Li Fan, the Hsin Hsing man, had taken water from a public irrigation ditch which was at the time considered to be carrying privately owned rather than public water. The men from Ta Yu claimed that the water which Li Fan had taken was from the cooperative pumping station of which he was not a member. As they were beating him senseless with a metal hoe, his father tried to come to his aid and was also beaten.

The cooperative station, which pumps water from a nearby river, is located in the

larger and wealthier neighboring village of Ta Yu. Most of its members are from Ta Yu village, although there are several members from other nearby villages, including a few from Hsin Hsing. Because the great majority of the pumping station members are Ta Yu villagers, these members have the controlling hand. Members from other villages have little if any voice in the making of cooperative policy. The cooperative's large size caused the Ta Yu members to feel that they had little to fear from outsiders. Apparently, the cooperative had unofficially agreed that any outsider caught taking the cooperative's water should be beaten as an example to others and that the association would fully back

[†] Bernard Gallin, *Hsin Hsing, Taiwan* (Berkeley: University of California Press, 1966).

whoever did the beating in case any trouble should ensue. Before the beating of Li Fan and his father several other such incidents had gone unchallenged.

When Li Fan and his father were carried back from the fields, word quickly spread through Hsin Hsing village. The villagers were at once incensed and felt that those responsible for the brutality should be punished. The police were notified at once, and a doctor was called to treat the men's severe wounds. But until the doctor or police arrived, I was called in to administer first aid—mainly to stop the bleeding—and also to photograph Li Fan in his beaten condition.

The two police officers who soon came on their bicycles from the local police station were also angry at this new violence and recorded the stories of the two victims and the witnesses. Later, however, when an attempt was made to arrest the two Ta Yu villagers, they insisted that they had not started the fight, had only fought back in self-defense, and in fact had themselves been beaten by Li Fan and his father. This, under the law, meant that the accused would not necessarily be held by the police, especially since a wealthy and influential man in the area who was a friend of the Ta Yu pumping station cooperative had acted as guarantor for the two men. The men were therefore released and immediately pressed counter charges against Li and his father with the greatest haste and efficiency. The wealthy Ta Yu landlord and other leaders who were important persons in the cooperative as well as influential in the area and the local office of the government district knew how to handle such matters. And although the policemen themselves saw

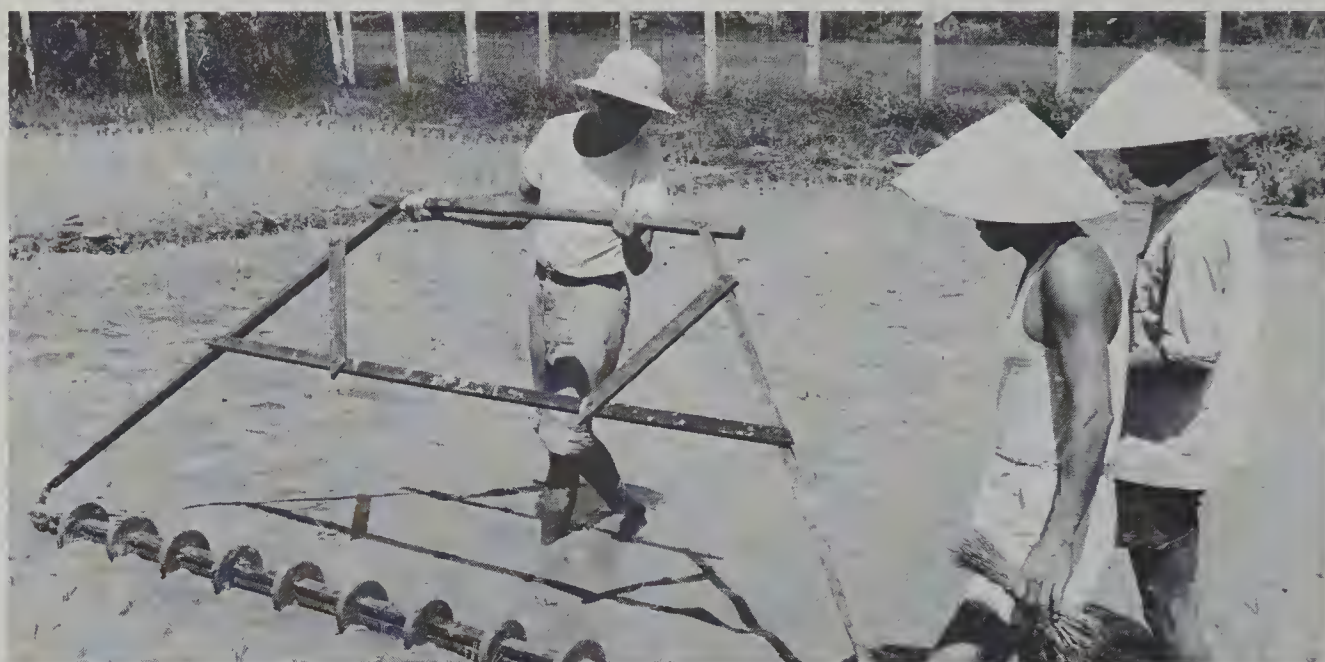
that the two Ta Yu men were not hurt in the fight, the two men were nevertheless able to purchase false affidavits of injury from a notorious doctor in a nearby market town.

Meanwhile, the Hsin Hsing villagers faced problems. They did not have anyone who could help write up the accurately detailed letter of accusation required under Chinese law. When they finally found someone to write the letter, it was submitted through the local police and had to go through a long series of channels before it finally reached the courts.

Several days went by and nothing seemed to happen in the case. When the Hsin Hsing villagers—mainly the few relatives and close friends of Li Fan and his father—went to ask the police what was happening, they were told that such things take time and that it would perhaps be better if they tried to settle the case with the Ta Yu villagers through mediation.

About this time, the Ta Yu villagers who were in the pumping station cooperative and who represented the two assailants made overtures to mediate. The reason they offered was that since both sides were hurt in the fight, they should forget the whole matter instead of pressing further and going to court. To this suggestion there was, of course, no agreement.

The Hsin Hsing villagers were in an awkward position. Although most of them would have liked to help Li Fan and his father win satisfaction and compensation for their injuries and to teach their assailants a lesson, they could do little. One of the main problems was that they had no one who would or could act as their leader. They were an unorganized group, and did not know what to do or how to go about



Agriculture in Formosa resembles that of South China. These farmers are plowing a rice paddy.

handling the case. This was unlike the men from Ta Yu, who not only had a large powerful pumping station organization to support them, but also had the wealthy and influential village landlord who was a key figure in the cooperative and an influential and powerful man in the area to act in their behalf.

... Another problem was that many of the villagers who were at first much aroused by the beating of their fellows, later became wary when they began to realize that many of the Ta Yu villagers taking an active part on that side were their own... relatives. To participate actively thus meant fighting against relatives with whom it has always been considered important to maintain good relations. Although these people still wanted to help Li Fan and their own village, they could not do so openly, but rather had to do it in secret.

Other villagers, because of their... relatives in Ta Yu, could not or would not

help even in secret, although some continued to pay lip service to the cause of their fellow villager. There were, however, a few villagers who could not even do this. They felt such strong loyalties to their [relatives] that they acted as "spies," telling their Ta Yu [relatives] of the plans being made in Hsin Hsing to fight the case. Obviously, they considered their relationships with their [relatives] more important than those with their fellow villagers. This was realized by the Hsin Hsing villagers who, although somewhat angry, could do nothing more than attempt to keep these people from learning their plans for the case.

The village mayor and several others who might otherwise have been organizers in Li Fan's behalf were among those who could give only limited open help. Therefore, on the Hsin Hsing side there was a complete absence of organized leadership. For want of someone who could or would lead, the village did little except talk about the case.

Not very long after the day of the beating the story of the incident had spread through the whole area. People were talking about the case so much that the winning of it by Hsin Hsing now became as much a matter of face as anything else. Hsin Hsing villagers began to express fears that "if these two Ta Yu villagers were to go unpunished, it would mean that anyone could beat Hsin Hsing villagers or their children at will." No one would respect their rights or face any more if they did nothing about the case.

As some days passed without anything being accomplished in the matter, some villagers who could openly show concern in the case became active in Li Fan's behalf. They managed to gather together the village men to discuss the matter at a meeting. During the course of the meeting, it became evident that the villagers generally did not know what course of action to take. Their main hope was to settle the matter through the traditional process of mediation rather than take the case through the courts. They feared that going to court would be expensive and take a great deal of time before settlement. But, perhaps even more important, they felt that because they were a small and poor village which was up against a large village and a wealthy, influential pumping station association, the whole case would be of no avail. They had always held the idea that the poor man without influence could do nothing against the rich and influential. The latter two elements, money and influence, seemed to them to constitute ultimate power. To attempt to do anything against this power was useless. For them even the law was subject to influence by the individuals who hold the power. (This

belief was undoubtedly reinforced during the period of Japanese rule, and the present government has done little to remove it.)

At the same time, the villagers felt that since Ta Yu was a neighboring village in which many Hsin Hsing villagers had relatives, if they were to continue to live in peace with Ta Yu and their relatives it was necessary to avoid doing anything which would contribute further to the tensions. After much discussion it became evident that the villagers preferred first to try again to mediate the problem. However, if this did not work out satisfactorily then the case would have to go to court, although they very much doubted that anything could be gained from a court trial.

A few days after the village meeting was held, the Ta Yu side again approached the village—this time through the mayor—asking that they again try to mediate the case. One of the influential men of the area had offered to be mediator at his home in another village about two miles down the road.... The mediator was a man who was considered to be biased in favor of Ta Yu, and he displayed his bias in the manner in which he tried to mediate the case. Still, since the role of the mediator is a very respected one, the Hsin Hsing villagers agreed to attend the meeting and stayed throughout the proceedings. They felt that it would have been disrespectful to the mediator to leave too soon and that, in addition, it would cause him to lose face, which was to be avoided. Nothing came of this meeting, since the mediator suggested that the Ta Yu side pay Li Fan and his father only a small amount of money as compensation for their injuries.

After several such futile attempts at

mediation, the case was finally called up for investigation in the courts. The court procedure called for the accused and the accusers and their witnesses to appear in a special investigative court somewhat similar to a grand jury. The purpose was to investigate the charges, hear the witnesses, and then decide if the court should indict the accused.

The investigation is highly formalized. Since neither the accused nor the accuser may have their lawyer present, the only document on which the investigators base their inquiry is the original letter of accusation. On the basis of the information furnished in the statement, it is up to the investigator to get at all the facts in the case.

Unfortunately, on the basis of the Hsin Hsing side's letter of accusation, the court investigator's questions to the witnesses were such that the investigator felt that there was not enough evidence for an indictment to send the case to court, since each pair of men insisted that they had been beaten. Instead, he, like the police earlier, suggested that the two parties involved mediate their differences. Unfortunately, he did not know many facts in the case, including the fact that mediation had already failed and that the local police could be called upon to testify that the Ta Yu men had not been beaten.

Later, however, additional facts were made available to the examiner, and upon learning of these, another investigation was immediately held and an indictment was brought against the assailants. Several weeks later the case came to court, and Li Fan and his father were awarded an amount of money large enough to cover doctor and hospital bills.

Man and Nature in an Indian Village

In this selection from *Gopalpur: A South Indian Village* the author, Alan Beals, has captured the balance in Asian society between control by physical environment and control by cultural forces. As he points out, the people he describes concern themselves more with the mastery of human relationships than with the mastery of things. Breaking with established cultural patterns is described as a more difficult task than gaining control over wind and water—or at least a more frightening task for the young man, Hanumantha.

Hanumantha's business is the business of almost every other adult male in Gopalpur. It is to plow the fields, to dig the gardens, and to harvest the ripened crops. The most important thing in Hanumantha's life is to find his place in the village. He must find a wife; he must have male children; he must have many friends; he must accumulate enough wealth to be able to arrange proper marriages for his children; and he must have a number of mourners at his funeral. To achieve these things, "to make his name great," Hanumantha must operate within the set of rules appropriate to success within the village. Many of these rules are unwritten and are not discussed by Hanumantha's relatives and neighbors. When someone breaks such rules, there may be little more than an increasing awareness that someone in the village is

out of his proper place. When this happens, Hanumantha's neighbors take action to restore the pattern that has been warped or broken.

At the moment, Hanumantha is following the course of action suitable to a young man. By developing his physical skills as a weight lifter and wrestler, he hopes to win a coconut at a local fair and offer it triumphantly to the village god. Later, Hanumantha will learn, as the older men in the village have learned, that deeds of strength and heroism bring only a passing reward, and he will then turn his attention to the making of alliances and coalitions designed to shield his growing family from the whims of Nature and the uncontrolled impulses of his fellow men. As he moves into middle age, Hanumantha will find that the basis of success in Gopalpur lies

[†] Alan R. Beals, *Gopalpur: A South Indian Village* (New York: Holt, Rinehart & Winston, Inc., 1967).

not in physical prowess, but in the number of cattle and the number of men that he can control.

Hanumantha considers himself to be a free agent. He decides what he is going to do and he does it. At the same time, Hanumantha's freedom is limited by the context within which he operates. That context includes the natural and material environment of the village of Gopalpur; it includes Hanumantha's childhood experiences; it includes the people who live in Gopalpur and the region surrounding Gopalpur; and it includes the rules and the ways of life which have developed in Gopalpur over many generations.

The Material Environment

Using tools and techniques available to them, the people of Gopalpur have interacted with their physical surroundings to produce a material environment that is a result of their way of life and at the same time a cause of it. The buildings and walls of Gopalpur, most of which were standing when Hanumantha was born and will be standing when he dies, channel the flow of traffic through the village, and so influence the frequency with which Hanumantha will encounter particular friends or neighbors. Many other things—the distance to the nearest neighboring village, the extent to which Hanumantha's ancestors have maintained the fertility of the village fields, the kinds of things that will grow in the fields, the forces controlling wind and rain—set subtle limits upon the possible ways in which Hanumantha can behave.

Gopalpur is a mile from the nearest

neighboring village. Unless he wishes to expend considerable effort, Hanumantha must find his friends and enemies within his own village. The buildings in Gopalpur are rectangular structures of stone and mud. A typical house is perhaps thirty feet wide and forty feet deep. At the front of the house, there is a raised veranda six to eight feet wide. In the center of the veranda is a large double door, set in a carved wooden frame with carved horses' heads projecting just above and on both sides of the door. There are no windows in the walls; light and air are admitted in limited quantities through holes cut in the flat clay roof. When it rains, the skylights are covered with plates and the householders sit inside in the darkness wondering when the water will find cracks in the roof and pour down into the interior.

The house in Gopalpur is a fortress, used for cooking, the storage of valuables, and the keeping of cattle. The real business of living takes place outside, on the veranda or on the stone platform under the nim tree. People carry food outside to eat. Housewives have a second flour mill on the veranda, where they may grind grain and gossip with the neighbors. The old man spends his days sitting under the nim tree, meticulously twisting rope on his naked thigh. The baby lies on the platform, or in a cradle suspended on ropes from the ceiling of the veranda. Older children play in the dirt in front of the house, pretending to cook or plow, or enact parts in a drama or ceremony. At nightfall, the family's two cots are placed in the street or in a cleared space in front of the house. The wife sleeps in one cot with her mother-in-law and the baby. The husband sleeps in the other cot with his

male children. The old man shuffles off to the fields where he sleeps on a platform overlooking the ripening crops.

In addition to the houses and stone platforms, the only structures of any importance within the village are small stone houses or shelters within which are placed the images of the various gods. The most important of these "godhouses" are those of the two village gods. One of these, dedicated to Hanumantha and his reincarnation, Bhima, is located at the southeastern edge of the village. It is surrounded by a cleared space and a low barrier. To this place come wedding parties from other villages and, on feast days, processions of people to make offerings. The other important godhouse, located outside the village, is the tomb of Shah Hussein. For generations, this god or saint has defended the village against hard times and misfortunes. Every year, when they feel happy, the young men of Gopalpur walk in procession, with drums beating, to the sacred Bhima River ten miles away. A Brahmin priest is paid ten rupees (ten days wages) to carry a potful of water from the river to wash the tomb of Shah Hussein. Scattered throughout the village are smaller godhouses. There is a termite nest dedicated to Nagappa, the snake god, and there are temples to the often present meat-eating goddesses of cholera, of small pox, and of scabies.

The Countryside

Outside the narrow compass of the village is a fence of thorns designed to protect the fields from roaming cattle. Here stand great stacks of hay used to feed the cat-

tle during the hot dry months between March and June. Narrow passageways lead from the village down thorn-lined pathways into the fields. To the east runs a small stream, swollen with flood waters during the rainy summer season but reduced to a few stagnant pools in the hot season. At dawn and at twilight, the women of Gopalpur come to scoop out shallow pools in the sand and fill their brass water jars with the slowly gathering water. At other times, wrinkled old women wash their pet goats or water buffaloes, and small children wade in the lukewarm water and tumble in the sand. Men wrap their headcloths around their waists, wash their bodies and then their dhoties (waist cloths) and shirts. Women wrap themselves in their husbands' worn dhoties and spread their saris (eight yards of colored cotton cloth) across the sand to dry.

Beyond the stream, looking toward the market town of Kandkur, lies the finest land in Gopalpur. During the fall and early winter, these fields bear great stalks of sorghum millet, eight to fourteen feet high. At the tip of each stalk is a heavy fistful of the grain that forms the basis for almost every meal. When the watchmen are not looking, passers-by stop to cut the ripening canes and then move on, chewing the sweet pith and spitting it out along the pathway. To own one of these fields is to be rich, for every acre yields three or four crops every two years.

North of the village, the land is higher and more sandy. Scattered through the fields are great mango trees whose acid, green fruit is the only fresh food available during the hot season. In a few places, ambitious farmers have scratched shallow wells and used them to irrigate patches of



The monsoon rains flood the roads and the fields and turn the land into a vast marsh. However, when the sky clears, the village bustles with activities, the farmer plants his fields, and a new life begins.

onions and chili and eggplant. Closer to the village, wealthier men have built huge stone-lined wells resembling swimming pools. Older men enter these wells treading softly on slabs of granite thrust into the sides of the well to form a staircase. Younger men and children, when it is time for their weekly bath or when the weather justifies such sport, approach the well at a gallop and jump from the parapet into the water twenty feet below. The beginning swimmer's older brother attaches water wings of pithy wood to his shoulders and tosses him casually into the water.

South of the village the soil is quite sandy. In low-lying places, moisture has gathered and the land is barren and salty. Where water trickles through the salty soil, salt-makers come, collect the saltwater and pour it onto great flat stones rimmed with clay. The water evaporates, leaving behind

it large crystals of off-white salt. Beyond this desert area, children six to twelve years old guide their sheep and cattle from shrub to forlorn shrub, or sit in a tree's scant shade and play forlorn melodies on their shepherd's pipes.

Beyond this pasture land, the terrain slopes gently upward toward the knife-edge of granite that marks the boundary of the village. Within the granite walls of this hill is said to be a secret cave where bandits once gathered to divide their loot. It is said that, even now a tiger lurks there. Young men sometimes come and search within the walls of the hill for bandits or tigers. In 1960, in a neighboring village, three young men found a *cheeta* (a leopard), attacked it with sickles and wood knives and, although they were seriously injured, gained a certain notoriety. Those who travel to the hill at dusk or

dawn will surprise a herd of antelope and see them bound effortlessly away across stream beds and thickets.

From the top of the hill, the surrounding countryside is visible. To the north and east stretches a low range of rolling forested hills a thousand feet high. To the south and west, the plain stretches down to the gorge of the Bhima River. Fifteen miles west, hidden by hills, is the town of Yadgiri where there is a railway station and where the great officials of government have their offices. Fifteen miles east is the town of Narayanpet where people go to sell their surplus grain and to buy clothing for special occasions.

A view from the top of the hill suggests some of the limits and possibilities which result from the location of the village. Because Gopalpur is located in the center of the plain, it lacks extensive forests or grazing lands. Wild boars do not come out of the mountains to attack the growing crops, and cheetas rarely prey upon the calves or sheep. Because the streams are wider toward the center of the plain, the road from Yadgiri to the distant city of Hyderabad bypasses Gopalpur and skirts the hill slopes where stream channels are narrower and more easily bridged. Because Gopalpur has a mixture of kinds of land, the village raises three separate major crops at different times of the year. This means that people in Gopalpur must work harder and more continuously than people in nearby hill villages, where rocky soil and good drainage make possible only one thin crop per year. Because the only road to Gopalpur is a three-mile-long cart track following the sand and mud of a creek bed, government officials and outsiders rarely visit.

In addition to that portion of the physical environment which can be viewed from a hill top, Gopalpur is deeply influenced by larger forces of geography and climate. Because the plain, or rather plateau, upon which Gopalpur is located is cut up by the deep gorges of such rivers as the Bhima and separated from other portions of the great central plateau of India by forested hills and mountain ranges, Gopalpur and the region around it has always been isolated from the main streams of history. Small kings and bandit chieftains have built great fortresses on the rocky monoliths of the plains and from them have raided each other's palaces and the surrounding villages. Even now, each village is a fortress and, hidden beneath grain sacks or in dark corners of his house, almost every man has a sword, a spear, and sometimes a breast plate and shield. When people in Gopalpur were told about another village where forest officials and other minor government servants took bribes and extorted money from the farmers, the response was immediate: "If anyone tried that here, we would kill him." Recently, thirty young men from a village near Gopalpur were arrested for making an armed attack on another village some fifty miles away.

The most important deities in the Gopalpur region are Hanumantha and Bhima, different manifestations of the same violent, untamed god. Hanumantha is the monkeylike god who helped Rama, the hero of the *Ramayana*¹, to rescue his wife, Sita. It is recorded that Hanumantha entered the capital city of Ceylon and set fire to it by tying a torch to his tail. Bhima was the largest and most warlike of the

1. Hindu epic.



Life in village India centers around the family. The members of this family work together on the farm. Here they thresh rice by hand, making sure nothing is wasted.

five Pandava brothers, the heroes of another epic, the *Mahabharata*. Surrounded by a rugged and forbidding countryside and with such gods as models, the people of the Gopalpur region have maintained a way of life relatively unaffected by the distant cities.

Whether he is choosing a place to sleep at night or a particular deity to worship, the individual in Gopalpur is influenced by the shape of his village and by the shape of the countryside around his village. Hanumantha is free, but his freedom is limited by a material environment that influences not only his everyday experiences, but the history and development of his village as well. Nowhere is the influence of environment upon man more marked than in the methods used for obtaining food and the timing of work and play.

Food Production

To deal with his environment, the farmer of Gopalpur has available to him a stock of techniques and ways of acting handed down to him from his forefathers. Tools are made in the village by the farmer himself, working with the carpenter and blacksmith.

A five-acre field must be plowed at least twice, requiring eight days of labor by one man and two bullocks. Cow manure and compost must be transported from the village to the fields before the crop is sown. This is done by two men working with short-handled hoe-like shovels, two baskets, two bullocks, and a cart. The preparation of the soil may take as much as thirty days, depending upon the amount of manure available, the distance of the field

from the village, and the amount of energy that can be mustered at times when the temperature in the shade exceeds 110 degrees Fahrenheit. Using a harrow to break up clods and to level the soil requires another eight days of labor by the farmer and a team of bullocks.

The field is then sown in one day, by three men using a seed drill and a pair of bullocks. Some crops, rice for example, are sown broadcast. Sowing marks the climax of one to two months of steady labor. After sowing, the farmer is free to rest, to care for one of his other fields, or to hire out as a laborer. After a month, the field must be weeded and the crop thinned. The work demanded by these two operations varies depending upon the amount of rainfall and the number of seeds that have germinated.

A single five-acre field absorbs from four to six months of intermittent labor; rice fields are smaller but require more intensive cultivation, and constant attention. Most farmers in Gopalpur own a few acres of black soil land, a fraction of an acre of rice land, and a larger patch of sandy land. Each of these kinds of fields is planted at a different time of year to a different kind of crop. The farmer begins his agricultural year with *Ugadi*, the New Year festival, in March or April. During May and the early part of June, the hottest months of the year, he transports manure to those fields which are to be planted in June. Toward the end of June, the hot season ends and the monsoon rains begin. In July, the farmer plants millet and legume crops on his sandy fields. Sometimes, he lets his black soil fields lie fallow; sometimes, if he has plenty of manure, he plants a first crop on them. In August or September, if

the rains have been good and the irrigation tank (reservoir) is filled with water, the farmer plants his patch of rice land. In September or October, the black soil fields are planted to "white sorghum," the major food crop of the village.

In addition to the basic millet and legume crops, there is a host of minor crops. Everyone tries to have a few mango and tamarind trees; everyone has a small vegetable garden devoted to chili, eggplant, onion, and leafy vegetables. For cash, people plant peanuts, tobacco, or cotton, or they may sell surpluses of any of the other crops. Virtually every family tries to have a female water buffalo for milk, two plow bullocks, and a few sheep, goats, and chickens for feasts and sacrifices. Except during the hot season from the end of February to the end of June, there is always more work than it is possible to do. A little more manure can be collected and added to the compost pit; a few more green branches can be cut for the goat; more time can be spent plowing and leveling the fields. If a man is really ambitious, he can plant trees or dig a well and start a garden.

Times and Seasons

Men and women in Gopalpur rise with the first light of dawn. The woman stumbles into the black interior of the house and brings out cold food left over from the day before—perhaps a jar of liquified mush to be drunk hurriedly this early, perhaps a little rice. The farmer wolfs his light breakfast and hurries off to his field, carrying his plow over his shoulder and driving his cattle before him. When the



This old-fashioned method of threshing is still practiced in most of India's rural communities. A team of four oxen is led around and around on top of piled-up wheat and threshes out the grain with their hooves.

sun becomes warm and the bullocks begin to tire (10:30–11:00 A.M.), the farmer returns to the village. If the day is very hot, he comes back early in order to swim and to rinse out his clothing before eating. Otherwise, he splashes water over his legs and arms and then sits on the kitchen floor, or outside on the veranda to eat.

While the farmer plows, his wife has brought several pots of water from the stream. She has swept the house and the yard in front of the house, and carried the rubbish and manure to the compost heap outside the village. She has dried grain on the roof and ground it, swinging the stone handmill with muscular arms and the weight of her body. She has started a fire in the kitchen using only a few small sticks of wood. Over the fire, she has placed an earthenware pot containing chili, beans, leafy vegetables, tamarind, salt to

taste and water to cover. Each day, this mixture is slightly different: the vegetables change, the beans may be fresh or dried, and of several different varieties. Whatever else the mixture may contain, it must always include an abundance of chili and a reasonable quantity of salt.

While the vegetables simmer, the housewife mixes water with sorghum flour, pats the dough into thin cakes of unleavened bread and toasts them over the fire. After pouring water over her husband's arms and legs, she serves his meal, spooning the vegetables onto the bread to make a kind of open-faced sandwich. With this basic meal, people may have a little rice, some mango pickles, or perhaps some yoghurt mixed with water. If the water buffalo is giving milk, *ghi* (clarified butter) is poured over everything that is to be eaten.

After the meal, from about twelve to

three, people sit quietly in the shade and gossip. The farmer, if he is tired, sleeps. Younger men and children play games in the shade. At three in the afternoon, nine hours after dawn by the local reckoning, men return to the fields to work until dusk. Women, too, go to the fields during this part of the day to collect grass for the cattle, or to perform light chores connected with weeding or harvesting. At dusk, people return to the village to consume cold meals by the pale light given by cotton wicks placed in clay lamps. If the moon is full, people gather in the streets. Men laugh and gossip; women form groups and sing songs and dance. If there is no moon and the night is dark, people go early to bed, and by nine o'clock the village is silent.

During the rainy season and the cold season, when such activities as weeding and harvesting are at their peak, people spend the entire day in the fields. The men are joined at noon by the women who had remained home to cook. During the sowing and harvesting seasons in particular, men do not bathe or have haircuts; they live, eat, and often sleep in their fields, taking advantage of every moment of daylight. On some days, when there is not much work in the fields, the whole family will get up while it is still dark and go off noisily with their neighbors to the forest, four miles away. There, long before the forest rangers have risen from their comfortable cots, firewood is collected in great headloads, and carried back to the village. Sometimes in the forest, young people stray away from the group. It is here, that the young man whose marriage has been too long postponed, or whose wife is too young to provide appropriate companionship, meets the housewife whose husband

is too old, too disagreeable, or too dark to please her.

If there is excessive dalliance in the forest, members of the group may delay their return to the village. When this happens, they are likely to be met at the road by the forest rangers. The forest rangers confiscate blankets or shirts or headcloths of the villagers, and send them on their way. Later, these items of clothing will be ransomed for a rupee (a day's wages) apiece. Anyone who is caught by the head forest ranger is required to pay five rupees for the privilege.

During the hot season, the pattern of life in Gopalpur changes. Every night, when the moon is shining, some communal activity takes place. In the daytime, the village is quiet. Men sleep in the shade or in a cool corner of their house, or, for that matter, in someone else's house if it is cooler or quieter. Women hurry through their chores and, by afternoon, all are sleeping.

Mastery of the Environment

Although, at times, people in Gopalpur are oppressed by the heat of the sun, by the darkness of the night, or by rain or cold, they feel themselves to be the masters of their natural environment. Anyone in Gopalpur who is ready and able to work can earn an adequate living, and enjoy the available luxuries. Almost everyone receives three meals or more per day. Every four months almost everyone receives a shirt, a dhoti, and a headcloth, or a sari and blouse. Everyone in Gopalpur has a place to sleep and cook. There is no one who cannot afford the price of a haircut.

Almost everyone manages to obtain tobacco to smoke, and betel leaves and areca nut to chew. Everyone can afford to provide a coconut, or a banana, or some sandalwood for the worship of the village gods. Any young man who needs cash for his marriage can find employment for a year as a landlord's servant. Every woman wears jewels given to her at the time of her marriage. The tax collector always receives the money due him. True, almost everyone in Gopalpur is in debt, but because the money lenders are astute and knowledgeable, the size of a man's debt is itself an index of his prosperity. Only a wealthy man can borrow large sums of money.

The fact that, at any given time, most people in Gopalpur are satisfied with their manner of earning a living and control over the physical environment, does not mean that this control is perfect. There are too many weeds, and every year the farmer sees ants and caterpillars and stem borers and antelope and rats carry off a major fraction of his crop. Although most people in Gopalpur are healthy, very few mothers can boast that all of their children are living. Malaria, cholera, small pox and bubonic plague are familiar visitors to the village. These failures in the control of the environment are not really sources of anxiety, for even in these instances, people in Gopalpur believe that they have control and understanding. Disease, for example, is considered to be a punishment for sin and a normal result of the neglect of one's responsibilities toward the supernatural world. Crop failure, flood, and disease are regarded as disasters to be dealt with when they appear in accordance with traditional techniques.

Although the material environment shapes and influences almost every aspect of life, people do not regard Gopalpur's pattern as something to be changed, improved, or fought. Things, both good and bad, are as they always have been and as they always will be. For Hanumantha, the problems of life stem, not from the material world, but from the human beings who occupy it. Hanumantha knows that his crops will sometimes fail; he knows that he will suffer from headaches and fever during the hot season. He is not concerned with increasing production so much as he is concerned with protecting his fields from thieves. He is not concerned with curing illness so much as he is concerned with preventing it by preventing sinful behavior in himself and in his neighbors. People in Gopalpur are more concerned about the mastery of human relationships, than they are about the mastery of things. . . .



Conclusions

1. What are some examples of instances in which (1) Asian man has gained the upper hand over his environment through intelligent choices, and in which (2) he has been cowed into accepting a relatively unchanged environment?
2. Is man ever totally dominated by his geographic environment? Give support for your answer.
3. How does man's ability to choose, ignore, innovate, diffuse, and reject ideas give him a possibility for different development in very similar environments? Give examples.
4. How do man's ties to the land provide both positive and negative influences on his cultural development?
5. How is the American reaction to physical geography different from the Asian reaction?

Suggested Readings

Beals, Alan R. *Gopalpur: A South Indian Village*, New York: Holt, Rinehart & Winston, Inc., 1967.

This study by an anthropologist is written with a warmth and creativity that makes it read more like a novel than a case study. Yet the book presents much factual information about the way in which an Indian village functions. The study of a young villager from birth through death reveals the nature of life patterns in India.

Buck, Pearl S. *The Good Earth*, New York: The John Day Company, Inc., 1931.

This novel presents one of the very finest discussions of the life of the Chinese farmer. Pearl Buck lived in China and knew the Chinese farmer's life well.

Cressey, George B. *Asia's Lands and Peoples*, New York: McGraw-Hill Book Company, 1964.

This is the standard Asian geography text for American schools. It has many excellent maps and tables. Predominantly concerned with physical geography and economic activity, it gives only passing reference to the cultural geography of Asia. It can also serve as an excellent source book for data and place location in Asia.

Singh, Khushwant. *Mano Majra*, New York: Grove Press, Inc., 1956.

This novel is about the partitioning of Pakistan and India in 1947. It is important to geography because Singh accurately describes the impact of land and the monsoon on man's activities. The book also presents a well-developed picture of the village. Another excellent book by Singh is *I Shall Not Hear the Nightingale*. Both works create vivid pictures of life in South Asia.

Spencer, Joseph. *Asia East by South*, New York: John Wiley & Sons, Inc., 1954.

This is one of the best-written general geography books for all of Asia. It has a strong cultural emphasis and includes a number of chapters on aspects of Asian cultural geography that no other general geographies offer.

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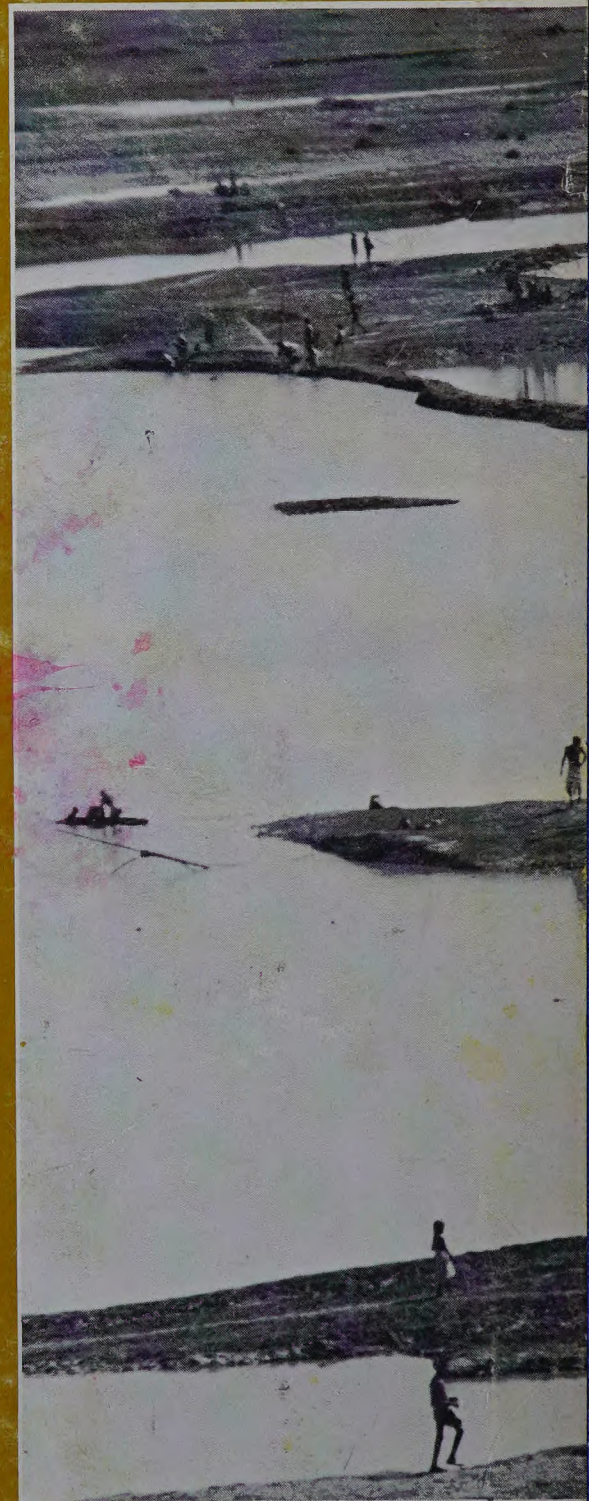
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